THE Soybean Digest

OFFICIAL PUBLICATION • AMERICAN SOYBEAN ASSOCIATION

The quality is due to soybean oil. See page 8.

JANUARY ✦ 1953

VOLUME 13 ✦ NUMBER 3

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SKELLYSOLVE B. Making edible oils and meals from soybeans, corn germs, flaxseed, peanuts, cottonseed and the like. Closed cup flash point about −20°F.

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THE Soybean Digest

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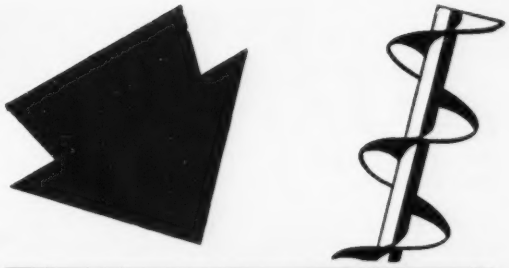

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EDITOR'S DESK

HERE'S AN ENLIGHTENED DAIRYMAN

State legislatures are meeting in most states again in 1953. Several of them may consider legislation which would lift restrictions and taxes on food products made from soybeans, especially margarine. Iowa, the second largest soybean production state, is among those.

Music to the ears of those men in the soybean industry who have been preaching it for years was a recent statement by Lyman McKee, president of the Wisconsin unit of the American Dairy Association, when he said:

"You cannot legislate what people are going to eat. Dairymen are concerned about substitute products, but we don't believe that legislation is the answer."

McKee stated that dairy farmers themselves must shoulder the load of developing programs of public relations, advertising, merchandising and research.

To Mr. McKee we doff our hat! His is enlightened leadership for an industry which sorely needs it. He recognizes that the consumer must be the final judge, and that the consumer is going to have margarine in the form desired, without benefit of restrictive taxes.

There is a definite place in our economy for butter. There is a place for margarine. Both should sell on their own merits.

CONGESTION AT PORT OF NEW ORLEANS

Exportation of soybeans from the United States is a postwar development. We were importers of the crop previous to World War II. Facilities for exportation were inadequate at the close of the war. They are still inadequate. The letter from Ray Goodwin, in the "Letter to the Editor" column on page 33, is an example of what happens during the harvest season. Wheat, corn and soybeans all move into export channels during the same period, causing congestion of the worst type.

The large new addition to the New Orleans Public Elevator will help relieve the congestion. The new elevator at Mobile has lightened the load. But if we are going to continue to export large quantities of soybeans each year we must have adequate facilities to handle the crop at export ports. Far too many shippers are taking serious losses because cars are held on track for many weeks awaiting unloading. Any change in grade is absorbed by the shipper. If there is loss, he must stand it. In an effort to clear the situation the Port of New Orleans, the natural geographic outlet for Midwest and Midsouth soybeans, has embargoed the unloading of wheat from early December to Feb. 1, in an effort to catch up on corn and soybean shipments awaiting unloading.

Greatly complicating the picture is the flood of dirty soybeans—dirty from the standpoint of foreign material—arriving at the Port of New Orleans. On Dec. 30 an accumulated total of 103,293 bushels of soybean dockage was on hand at the New Orleans Public Elevator. This material had been screened from soybeans arriving there in order to bring them up to contract specifications. On the same date only 386,357 bushels of soybeans were on hand in the elevator, with another 93,000 in port and still on river barges.

Sixty-nine carloads (1500 bushels each) of soybean screenings had accumulated in one elevator, were occupying valuable storage space, hampering movement of soybeans and other grains!! Rail freight had been paid on that tonnage, handling charges had been paid, cleaning charges on the bushelage handled to accumulate that tonnage of foreign material had been absorbed by shippers and handlers.

We must, as producers and handlers of soybeans, recognize that we are dealing in an oilseed crop. Some of the soybean dockage is undoubtedly small particles of soybeans—thanks to low moisture in the 1952 crop. But we must admit that sticks, stems, pods, weed seeds, corn, sand and other such items produce neither soybean oil nor soybean meal. There is no justification for the inclusion of 3 percent of those products in No. 2 soybeans.

A change in the Federal grading standards on soybeans is sorely needed. And recognition of the situation as it exists must accompany the change. Neither the domestic processor nor the foreign buyer wants our weed seeds and junk. The only person being penalized by the present standards is the producer of the crop.

WHY EXPORT MARKET HAS SLIPPED

During the crop year ending Sept. 30, 1952, we exported from the United States 17 million bushels of soybeans. Exports of oil from another 27.8 million bushels brought total exports, in oil equivalent, to 44.8 million bushels, out of a 280-million-bushel crop.

During the previous crop year we exported 27.82 million bushels of whole soybeans, together with 51.3 million bushels in the form of oil, or a total of 79.2 million bushels.

Our export market for 1951 crop soybeans, then, shrank by 34.4 million bushels. Almost 45 percent of our market disappeared! There were a number of reasons.

Soybean oil exports from 1950 crop were unusually large because of the extremely short olive crop in Spain and Italy. The same two countries had unusually large olive crops in 1951, needed little of our soybean oil.

Another explanation of the shrinkage is the relatively higher price commanded by American soybeans from 1951 crop. High livestock populations, together with greatly increased interest in the feeding of adequate quantities of protein, and the impetus given to soybean oil meal by fortification with antibiotics and B-12, pushed soybean meal prices to high levels and held the price of soybeans at similar levels. Other oilseed crops could be purchased outside the United States to greater advantage than our soybeans. Price was certainly a contributing factor to lower exports.

The undesirable foreign material content of our American soybeans was certainly another factor. Coupled with it was the increased availability of Manchurian soybeans, large quantities of which were processed in German mills on a toll basis, with payment taken in oil.

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ACTIVITIES OF YOUR ASSOCIATION

CONVENTION. The American Soybean Association will go to St. Louis for its 1953 convention, the ASA executive committee and board of directors decided in their Dec. 5-6 meeting held in Chicago.

Hotel and exact dates are to be picked soon. The date will be moved forward this year and the convention will be held some time the last half of August. This is a more favorable time for some producers than the usual September date.

The following men will be members of the convention committee, President Chester B. Biddle announced: O. H. Acom, Wardell, Mo., chairman; Ed Tillman, Caruthersville, Mo.; Albert Dimond, Lovington, Ill.; C. G. Simcox, Assumption, Ill.; and Geo. M. Strayer, Hudson, Iowa.

COMMITTEES. President Biddle also announced the membership of two other committees at the Chicago meeting:

Trade and use promotion committee: Ersel Walley, Fort Wayne, Ind., chairman; Howard L. Roach, Plainfield, Iowa; Albert Dimond, Lovington, Ill.; John Sawyer, London, Ohio; and Ed Tillman, Caruthersville, Mo.

Awards committee: Jake Hartz, Jr., Stuttgart, Ark., chairman; W. J. Morse, Tuckahoe, N. Y.; and J. B. Edmondson, Danville, Ind.

COTTON MEET. ASA will have at least two representatives at the meetings of the National Cotton Council of America in Dallas, Tex., this month. O. H. Acom will attend. And either President Biddle or Secretary-Treasurer Strayer will represent the Association.

MARGARINE. Efforts of the Association and other interested groups to repeal the Iowa margarine law resulted in four bills being placed in the hopper when the legislature met in Des Moines Jan. 12. These would (1) remove the ban on yellow margarine; (2) remove the 5-cent tax on margarine; (3) allow purchase and use of margarine by state institutions; and (4) retain the yellow ban and the 5-cent tax on margarine made with other than domestically produced fats and oils.

Favoring repeal in addition to the Association are wholesale and retail grocers associations, the Iowa Soybean Processors Association, and in some cities, the Junior Chamber of Commerce. Opposing are Iowa dairy groups.

It appears that there may be more opposition in the legislature to the repeal of the 5-cent tax than to the yellow ban. The tax has been bringing in yearly revenue of over $600,000 that would have to be replaced by other sources in a year when there are numerous demands to increase state appropriations. The dairy groups, however, are not opposing repeal of the tax.

RESEARCH. The Association is backing expanded basic research by the U. S. Department of Agriculture and other agencies. The board reaffirmed the resolution adopted at the 1952 convention which called for adequate appropriations for soybean research in keeping with the expanding importance of the crop, and earmarking of federal funds to insure that funds so voted are used for basic research. And it authorized the executive committee to take the action necessary to point up the need for expanded research in soybeans and soybean products.

The Association will also take part in the program of the National Cotton Council of America that is promoting expanded basic agricultural research. The Council is calling a meeting of interested agricultural groups to consider such a program early this year.

Wm. Rhea Blake, executive vice president of the Cotton Council, pointed out to the U. S. Senate subcommittee on agricultural appropriations that appropriations for agricultural research have failed to keep pace with the schedule visualized by the Research and Marketing Act, and that since 1950 there has been a steady downtrend in the size and effectiveness of the U. S. Department of Agriculture's research program, with a decrease in the number of research workers.

Since the progress of the soybean and other industries depends directly on research, and since present progress is largely due to the basic research of 20 years or more ago, the board felt it extremely important that basic research not be allowed to lapse.

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THE BURLAP COUNCIL

How to shave bag costs

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Burlap Bag prices are low.

They are multi-trip bags . . . every re-use cuts the cost still more. And Bemis quality burlap gives you maximum re-use.

That's why you can shave costs with Bemis Burlap Bags.

P. S. Supplies are excellent, too. The jute situation overseas shows you can base your long-term plans on burlap.

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THE COVER PICTURE

The photograph on our cover this month shows a pretty table setting, and the lovely table cloth is not linen, as you might imagine, but oilcloth in its new and modern version. Artistic design and smart coloring has made oilcloth one of the most desirable of table coverings for the American housewife. Public demand for this popular, easy-to-clean coated fabric is greater today than it has been for many years, and there are many reasons why.

The material itself consists of a resilient, waterproof coating on a sturdy muslin cloth. Patterns are colorful and attractive and can be obtained to harmonize with any home decorating color scheme. Oilcloth stays clean and fresh-looking, and is easily cleaned—right on the table—with a damp cloth or soap and water. Spilled foods and liquids whisk right off in a jiffy.

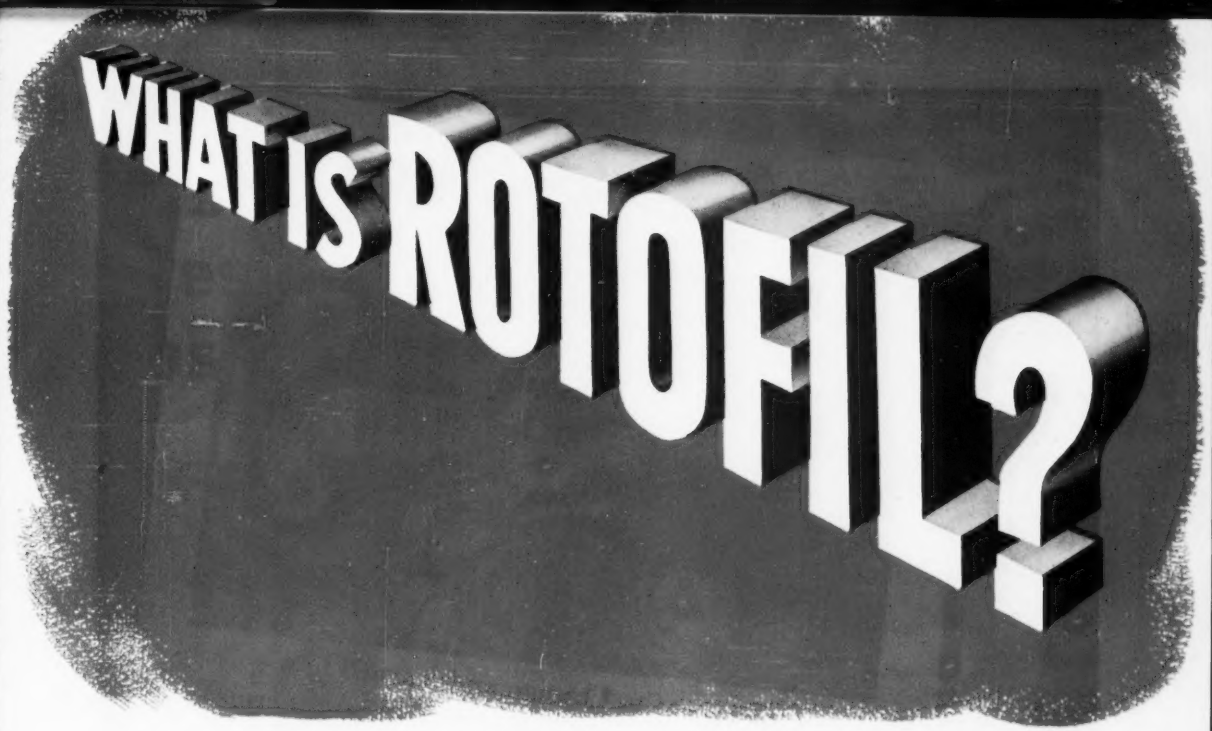
Soybean oil is one of the important ingredients used in its manufacture, because it imparts softness to the cloth and makes it easy to drape over the table and adds to its long life. Blenback is the name of the oilcloth manufactured by Columbus Coated Fabrics Corp., Columbus, Ohio. So named because the extra color coating on the back harmonizes with the pattern color on the face. The photo is courtesy of that firm.

—s b d—

SPRAYING HELPED

A soybean field so badly infested with vines and Johnson grass that it was impossible to combine, was combined without difficulty after it was sprayed with pentachlorophenal, reports W. T. McKinney, Anguilla, Miss. The spraying was reported on pages 14 and 16 of the December issue of Soybean Digest.

McKinney wrote to Kent Pellett, managing editor of the Soybean Digest: "The Ogden field which you saw so completely infested with vines and which we had sprayed with penta just prior to your visit (in mid-October), was harvested with no trouble whatever and even after the serious shattering which occurred before the chemical was applied, yielded a fair amount of beans."



ROTOFIL is a new system for direct solvent extraction of cottonseed and other seeds not readily processed in conventional soybean extraction equipment. It is the product of Blaw-Knox development of the Southern Regional Research Laboratory research in seed extraction. It complements the well known ROTOCEL system which is operating in many modern plants for solvent extraction of soybeans and cottonseed press cake.

In this new process, cottonseed or other seed is prepared for extraction in equipment identical to that used in preparation for hydraulic pressing. For this reason ROTOFIL appeals especially to cottonseed processors now using hydraulic presses.

ROTOCEL

Outstanding in application to soybeans and press cake because:

- ★ Less residual oil
- ★ Less steam and water required
- ★ Less maintenance
- ★ Filtration of miscella is eliminated
- ★ No vapor scrubbing required

ROTOFIL

Outstanding for direct extraction of cottonseed because:

- ★ System accepts cottonseed meats containing fines
- ★ Finished meal is substantially free of GOSSYPOL
- ★ Extraction rate is more rapid, more dependable
- ★ Cottonseed plant can process a variety of seeds
- ★ Provides economical extraction for small mills

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Mr. and Mrs. Everett Meyers of Grant County, South Dakota, took a trip you will find interesting:

"We went to Chicago and learned how Creative Processing eats up 3/4 of our farm crops"

"It was certainly a thrill to visit some of Cargill's Creative Processing installations during a trip we recently made to Chicago," says Mr. Everett Meyers of Grant County, South Dakota. "It opened my eyes to see what an important part a creative processor like Cargill plays in moving crops from our farms to the final users. In fact, it takes thousands of processors all over America to 'eat up' the 3/4 of our farm crops that the U. S. Department of Agriculture figures show are consumed *off* the farm. In Chicago I actually spent two rainy days tracing down where some of those farm products are going."

"Processors over 19 states are supplied with grain from the big Cargill elevator in Chicago. There they have this giant unloading machine that picks up and dumps a carload of grain every few minutes. While Cargill is known first as a grain firm, they are, themselves, important processors of farm products. And, in particular, they are creative processors – who either find ways to make better products for our farms, or find better markets for our farm products.

"You'd be surprised at what happens to a simple little soybean when a creative processor like Cargill gets hold of it. At their Chicago soybean plant, Cargill makes that bean ready to use in plastics, refrigerator paints, animal feeds, cooking oil, shortening, and more than fifty other useful products. We can't do that on our farms. That's why creative processing is so important in broadening the market for soybeans – finding ways to use up more and more soybeans.

"On the shelf in a Chicago store I saw a Cargill packaged and processed box of lawn seed. It contained a mixture of several different kinds of farm-grown seeds, some of them from our area. Because Cargill is processing this lawn seed (using their Miracle Green treatment to make it grow better) and because they are advertising and selling seed in big-city markets like Chicago, they are making a broader market for another group of our farm products."

CARGILL, Creative Processors of Farm Products

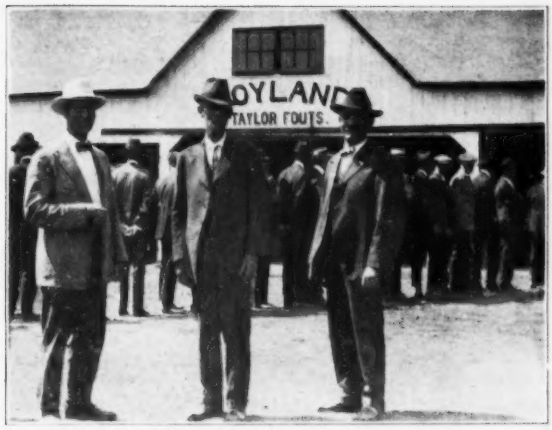
Processing and Grain Marketing Offices in Minneapolis and 35 other cities

Cargill CREATIVE PROCESSING

This is how Cargill is telling the importance of processing and processors to farmer-readers of papers like The Farmer, Wallaces' Farmer, Dakota Farmer, etc.

First ASA President Passes

TAYLOR FOUTS



FIRST MEETING. The three Fouts brothers during the first meeting of the American Soybean Association at Soyland Sept. 1, 1920. Left to right, Taylor, Finis and Noah.

Taylor Fouts, 71, one of the founders and first president of the American Soybean Association, died at his farm home, Soyland, near Deer Creek, Ind., Dec. 11. He had been ill six months.

Fouts was born near Deer Creek and had been a farmer and seed producer in that state all his life. He was graduated from Purdue University with a bachelor of science degree in agriculture and was one of the first 10 Master Farmers named in Indiana.

Fouts was one of the true soybean pioneers. His father first procured free soybean seed from the U. S. Department of Agriculture in 1896 or 1898. After Taylor's graduation from the University he began growing soybeans in 1904.

Within a few years he and his brothers, Noah and Finis, were growing soybeans extensively. They distributed seed of all the early grown varieties in the days when soybeans were grown for forage and the seed. Taylor was one of the first certified seed growers in Indiana and for years served on the state certification committee.

Soybean days in cooperation with Purdue University were held in 1910, 1914 and 1916 at the Fouts farm, which became known as Soyland. These soybean meetings helped to create widespread interest in the crop.

And in 1920 a Cornbelt soybean conference was held at Soyland. At this conference the National Soybean Growers Association was formed. Later the name was changed to the American Soybean Association.

Fouts was elected the first president. He was elected president of the Association again in 1928. He was elected an honorary life member in 1950.

In his last letter to Association headquarters, Fouts expressed his disappointment at not being able to attend the ASA convention at Purdue last September; and also said he had grown his 49th crop of soybeans at Soyland. "I hope to run the score higher when I snap out of this sag."

Surviving are the widow; two daughters, Mrs. Mary Margaret Bowman, Camden, Ind., and Mrs. Pauline Jones, Hobart, Ind.; a son, Frederick, Martinsville, Ind.; and a sister, Mrs. Clara Grace, Fort Wayne, Ind.

— s b d —

SOYBEANS

BY TAYLOR FOUTS

(First published in Volume II of the Association's Proceedings.)

Soybeans! Soybeans! You're like a Musical Band
To the Farmer who's tuned for the "Best on his land."
Microbic Composers, on the millionth wave length,
Sing "love" to the Rootlets as they're reveling in strength.
The Chlorophyll hums in the rays of "Ole Sol,"
And frosts, rains and winds are a "medley with Soys."
The "Pop o' the Pods" is Jazz to the pigs—
Puts pep in the Porkers—they grunt and grow big.
The "Rustle o' Leaves" to the Lamb is sublime,
He waltzes right up in full zest and on time.
The harvests of hay, pastures and seed-time
Give enchantment to tune and thrill to the chime.
The Kiddies they hop to the "Jingles o' Coin"
That Daddy rakes in while Soy Music's a goin',
Oh! Soybeans! Soybeans! You're a symphony grand
To the Farmer who's tuned for the "Best on his Land."

BLYTHEVILLE CROP

The 1952 soybean crop in the Blytheville area after it was all accounted for was somewhat smaller than at first thought, according to Paul C. Hughes of the Blytheville Farmers Soybean Corp.

"The beans were small," says Hughes. "We had an awful amount of shatter over the last 25 to 30 percent of the crop and ended up with moisture below 7 percent. I believe these factors cut Mississippi County's yield at least 400,000 bushels, made but not delivered to market.

"I wouldn't be surprised if we run into germination trouble on our seed. Just too much nicking."

Riverside Oil Mill—Marks, Mississippi

It's Another Anderson Exsolex Installation

This new installation at Marks, Mississippi, for the Riverside Oil Mill Company involves PreExpellers and an Anderson outdoor solvent plant. The versatility of the plant is shown by the fact that the management operates the outdoor plant on soybeans, and Expellers on cottonseed.

With Exsolex and Anderson solvent plants, oil millers can extract more oil from oleaginous materials . . . and more economically too . . . than with any other known process. Exsolex and Anderson solvent plants not only lower the residual oil content to less than one-half of one percent . . . but it does so efficiently at less cost than ony other system. That's because Exsolex and Anderson solvent plants are the only integral, patented process combining Pre-Expellers, special handling equipment and solvent extraction into one smoothly-operating, closely coordinated, effective system. The figures from the many new Anderson plants now in operation are truly amazing. If you haven't investigated yet, do so today. Write The V. D. Anderson Company, 1976 West 96th Street, Cleveland 2, Ohio.

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Policy for Agronomic Research

By J. B. PETERSON

Head, Department of Agronomy, Purdue University. Summary of remarks before the Tri-State Soybean Conference at Purdue University.

THE MANAGEMENT of agronomic research is largely a problem of most efficient use of dollars to employ energy and deploy it in such a way as to gain the most needed knowledge for farmers in the shortest time possible. As a basis of organization, we choose to think of research as falling roughly into three main categories:

1—Reconnaissance testing and surveys.

2—Empirical testing of situations or activities under different types of environment; for example, the pilot plant testing of industry and the testing of agricultural practices by field plots.

3—Fundamental research; for example, recognizing and describing the significant components of nature, developing better means of describing and evaluating them objectively and quantitatively with increasing refinement, discovering facts and relationships which are the basis for laws and theories, deducing theories, testing them and establishing laws.

Reconnaissance research of a very bold, daring and imaginative type is needed so that we will not stay in ruts and will not miss new things which may be very useful and valuable to know in current farming operations. Such research should always bracket the expected extremes by wide margins lest our own thought patterns keep us from the discovery of important truths.

As a rule we tend to neglect this type of research because it is too casual to be challenging to the well-trained scientist. It does not lend itself to respected, well-checked scientific reporting. We are trying to work out techniques for handling this type of testing. It is possible that extension men with proper training and with proper administrative clearance for use of their time on such projects could serve very effectively as a line of skirmishers to sort out the main problems and report them back to the main corps of well-trained, well-equipped, thorough-going research workers.

The fact that our research program for soybeans and other crops has been slipping, makes a long look at the subject by the soybean industry imperative.

Where Energy Goes

Most of the energy in agricultural research is placed in the intermediate area, an area which may roughly be called "empirical" but which can be so classed only relatively because it usually does include research which comes under our reconnaissance grouping as well as our fundamental list. Here we can place the application of genetic principles to the breeding of plants for specific purposes and the testing of fertilizer applications through green house and field plot techniques. The field testing of rotations, of the effect of additions of different kinds of organic matter and of the influence of different crops and different cropping patterns on the soil and on subsequent crops, can also be placed in this classification of research.

I think the allocation of a large share of our efforts to this level of research is wise for in this area much can be expected in the way of early returns. However, research at this level only, soon becomes sterile. Without new understanding, and new and better methods of analysis, such research soon fails to advance our knowledge.

A good example is the great volume of research which was done prior to 1936 on the base exchange mechanism of soils in the hopes of refining our knowledge to the point where we could identify different types of the base exchange complex in soils. All efforts using principles of chemical analysis known in those days proved futile until greater understanding of the behavior of x-rays and the development of their application to the identification of clay minerals showed that soil clays were composed primarily of very definite crystalline minerals.

Fundamental research seems costly at the time because its findings often do not apparently apply to the solution of some known practical problem and because the problems attacked are so difficult that they present chiefly the possibility of long arduous work, often without much hope of success. Such research is the backbone, however, of the advancement of all human knowledge, and hence of our technocracy. Findings of the basic behavior of natural phenomena continuously add to the efficiency of our second level research, namely our field plot and our pilot plant testing. In the long run it is our most efficient research effort in terms of either dollars or man hours because the results

J. B. PETERSON

are so extensive and have such wide application. This type of research must be carried on in the so-called applied fields of agriculture as well as in the so-called pure sciences.

The responsibility of administrators in land grant institutions is to work out a good liaison and coordination between workers in the two groups. The pure scientist is needed because of the depth of his understanding in certain limited areas. The agronomist with deep fundamental training and capacity to do fundamental work is needed because he alone has the overall viewpoint in the applied area, a view necessary to seeing the important problems and to attacking them with an integrated rather than a limited approach.

Support Comes Hard

Fundamental research is hard to get support for. For example, a friend of mine who was interested in atomic research could get little or no support for his research. What research and study he did, he stole from his free time, his nights and his week ends. He was brilliant and hard working and became a real authority and creative investigator. When the war came, it was discovered that he was the one man who could carry the development of the atomic bomb through a certain investigational bottleneck. Without his knowledge and creative skill and the basis of understanding set up by the work he had previously done, the development of the bomb would have been greatly delayed.

Administrators were very happy to use his talents once the need was apparent, although they had previously been reluctant to support his fundamental research solely on the basis of its value in extending the frontiers of knowledge. At present the man is the highest paid research worker on his campus. This incident is typical of society's reluctance to support the study of nature purely for the purpose of understanding it, mainly because of society's emphasis on usable results and its failure to realize that all practical experiments are fruitful only when supported by an expanding base of fundamental understanding.

In this day of concern over taxation, bureaucracy and public waste, I would like to say a word about the efficiency and quality of performance in the land grant institutions. In many years of experience in four of these fine schools I have been impressed with the fact that personnel in these institutions has been handled almost entirely on a merit basis. There may be a few cases where favoritism may have played a role but by the large, reward in these centers is based entirely on merit. Administrators, researchers, and teachers get their greatest satisfaction from achievement. This is the main motivation for such folks. Few men are chosen or promoted within the system on any other basis.

The standards for a research worker are high. He must have exceptional intellectual capacity in order that he may master the large volume of difficult and deep subject matter required before he is ready to work on the frontier of knowledge and in order to think constructively and creatively. He must have self discipline to go through long and rigorous training and to work doggedly and persistently on tough discouraging problems. He must be well-adjusted emotionally so that he will not be upset and distracted from his work and so that he will be able to divorce himself at times from the activities of real life and think in an imagined and abstract world with the same sharpness and clarity with which all naturally regard the realities of everday life.

The research worker must have a certain attitude. In the first place he must want the satisfaction of achievement more than any other reward. For his rare talents, hard work and skill he will probably be paid on a lower scale than any group in society. He must believe in truth and, because of this, believe in the clear, objective, unbiased, fair appraisal and reporting of his observations. He must have the open-mindedness and modesty to report his assumptions and theories with complete exposure of their limitations. The better he can expose to his colleagues risk of inaccuracy in his ideas the better scientist he is.

One of the most encouraging things about our society is the large number of such young men who are coming up through our educational systems, bright, energetic, fair minded, well-trained young men who have learned to think clearly, creatively, fairly and objectively. They are one of the greatest resources of true democracies. Fortunately there are careers for these folks in America. The land grant colleges are full of these men. They are a wonderful gang and working with them is a pleasure and an inspiration.

Variety Research Returns 2600%!

By J. W. CALLAND
Managing Director, National Soybean Crop Improvement Council

Great things have been accomplished through genetics, plant breeding and agronomy. The yield per acre of soybeans has been doubled in the past 25 years. We have been able to increase yields of superior varieties which provide higher quality products. These are the things that alter the whole balance of competition between crops. They change not only the quality of products but also the economics of production.

If just by waving a magic wand you could add one pound of oil to the amount extracted from each bushel of soybeans processed annually in the soybean mills of this country, you would be adding 40 million dollars worth of new wealth to the soybean crop each year.

Then if you could make soybeans yield one more bushel per acre, your magic would be worth another 30 million dollars annually.

Now consider that soybean yields have doubled since 1924, from 11 bushels to an average 22 bushels for the past three years. Give the scientists credit for less than half of that, say only five bushels, which means 150 million dollars each year at present prices.

Oil content has increased 25 percent, or two and four-tenths pounds per bushel. Credit the scientists with only two pounds of this increase. That means 80 million dollars a year.

But this is not all. Non-shattering qualities and lodging resistance probably save another two bushels per acre. Credit the scientists with only one. This means another 30 million dollars. Earlier maturity and better seed quality are each worth a

lot of money annually. But we won't count these for the credit score already adds up to 260 million dollars of increased value the researchers have added to our annual soybean crop. Truly, an astounding accomplishment!

Yet, Martin G. Weiss of the Bureau of Plant Industry said at the 1950 meeting of the American Soybean Association, "Although superior varieties have been or soon will be released for most of the soybean production areas in the United States, I wish to point out that these varieties represent only the first cycle of improvement. There are no indications that any ceilings have been reached."

If we accept the estimate of 10 million dollars total expenditures for soybean variety research by both the U. S. Department of Agriculture and the soybean states over the past 30 years, the returns on this investment are 2,600 percent annually. How refreshing to find in these days when government costs are so high that some of our tax money is paying back to us such magnificent profits.

However, profitable as soybean variety research has proved to be, the funds for the U. S. Regional Soybean Laboratory were cut in 1950, then again in 1951. The salary funds were cut 10 percent with a reduction in staff and projects, thus seriously crippling the work of the Laboratory.

Moreover, some of the leading soybean states are spending only token sums each year on this important work. Thus, it appears that the tremendous accomplishments and exciting future possibilities of soybean variety improvement and better cultural practices are not yet fully appreciated.

May I be pardoned for suggesting that instead of further crippling the work of the Regional Soybean Laboratory it would at least be better economics to subtract a single million dollars from the billions we pay annually in subsidies and put this million to work at 2,600 percent a year.

Salary funds were cut 10 percent.

— s b d —

BACKS TWO PROJECTS

The National Soybean Crop Improvement Council is contributing to two new soybean research projects, one on breeding disease-resistant strains of soybeans at the University of Missouri, and the other on weed control in soybeans at the University of Minnesota.

Dr. L. F. Williams, now on leave on a project in Brazil, will be in charge of the disease resistance project at the University of Missouri. Prof. R. S. Dunham is in charge of the weed control project at the University of Minnesota.

SEEDBURO APPOINTS

ROBERT H. BLACK

Robert H. Black of Minneapolis has been appointed vice president of the Seedburo Equipment Co., of Chicago and Minneapolis, Irving B. Phillips, president, announced in Chicago this week.

Bob Black has been identified with the grain, seed and milling business since birth. After several years of commercial experience in Iowa and Minnesota, he was Federal Grain Supervisor in charge of the Minneapolis district, and later was assistant to the director of the PMA grain branch of U. S. D. A. In the summer of 1951, he left Washington to join Seedburo.

Black will continue in charge of the Minneapolis office, but as vice president of the company, he will be available to grain elevator operators, millers, feed and seed dealers, and the agricultural processors and producers across the country in the capacity of consultant and advisor, as a special service of Seedburo.

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OKLAHOMA. J. Steve Swango combines soybeans for George Weaver near Miami, Okla. The crop made 10 to 15 bushels per acre.

Eastern Kansas, Western Missouri, Northeastern Oklahoma:

Soybeans Are Going West

PROCESSORS. S. O. Frey, manager, and Francis Johnson, processing plant superintendent, of Producers Cooperative Association, Girard, Kans. The firm recently added 200,000 bushels storage and a second French press. The bean mill has been in operation since 1947.

By KENT PELLETT
Managing Editor, Soybean Digest

WE DON'T USUALLY think of eastern Kansas and extreme western Missouri as being soybean territory—to say nothing of northeast Oklahoma. But there is a considerable area in Kansas and Missouri and northeast Oklahoma where soybeans have become an important crop. They are second in importance only to corn.

S. O. Frey, who manages the Producers Cooperative Association processing plant in Girard, Kans., defined the best soybean-growing area as lying 50 miles to the west and the same distance to the east of Girard, and extending the full depth of Kansas from north to south and 25 miles into Oklahoma. Since Girard is about 10 miles east of the Missouri border, that would include a strip 40 miles wide in Missouri.

Soybeans first came into the area early in World War II, in 1942 and 1943, when the government was asking for a larger acreage of oil crops. They have been growing steadily in importance since and are undoubtedly now a permanent part of the farm economy.

Early last October I drove from St. Joseph, Mo., where at Dannen Grain & Milling Co.'s processing plant I saw long lines of trucks waiting to unload in the early morning hours, through the Missouri River bottoms to Atchison, Kans., and then following close to the Missouri-Kansas border down into the northeast tip of Oklahoma.

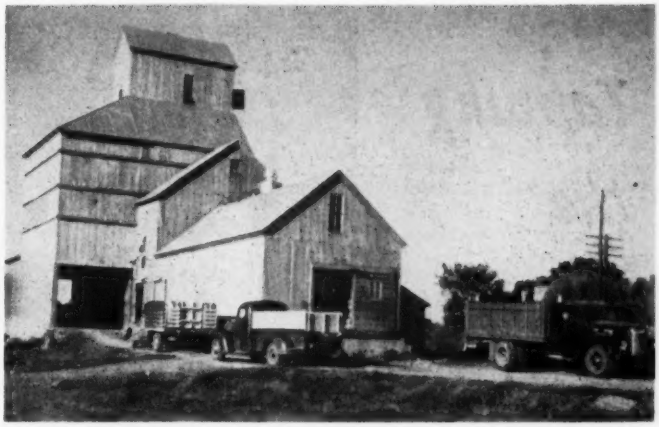
I saw a considerable acreage of soybeans on the Missouri River bottoms, but not many south of Atchison until I reached Louisburg, which is in approximately the north-south center of the state. From Louisburg south into Oklahoma there were many fields of soybeans.

* * * *

It was at the tail-end of harvest, which was one to two weeks earlier than usual. The air was full of soybean talk. Everybody was singing the crop's praises and you definitely got the impression that soybeans are coming up fast in the area.

Much of the area was in the grip of drought which deepened as you went south. At Louisburg the talk was of 15- to 25-bushel yields, but in Oklahoma 10 bushels seemed to be the going estimate.

The managing editor visited the area at harvest time. Photos are by him.



HARVEST. Trucks waiting to unload soybeans at W. F. Malone elevator at Hammond, Kans. There is a large acreage of soybeans in the area. The week before the photo was taken trucks sometimes backed up for blocks waiting to unload.

The drought in southeast Kansas was called the worst in the 80 years of weather records by the weather observer at Independence, Kans. Ponds were dried up and pastures burned. Fall planting was at a standstill. Farmers were waiting for a rain before sowing winter wheat.

The drought had cut the soybean yield but had not dampened the prevailing enthusiasm for the crop. Quite the contrary.

Soybeans have been through a period of testing the last two years and have proved themselves. Frey says that 1951 was as wet as 1952 was dry. Soybeans made a good crop both years. They stood both wet and dry spells much better than corn.

Girard Area

Farmers in the vicinity of Girard —which is about 35 miles from the Oklahoma border grow substantial acreages of soybeans, many of them from 80 to 120 acres. The past year they were turning out from eight to twenty-five bushels per acre in spite of the drought. Other leading crops in the area are wheat, corn and milo.

Sam Reda, feed man for the Cherokee Grain Co., Cherokee, Kans., said soybeans were increasing rapidly in the area. He mentioned as reasons the fact that they are the best cash crop for the area and their ability to stand dry weather better than corn.

The acreage there was larger in 1952 than the previous year, though the firm had handled only 27 carloads of beans so far compared to 42 the year before on a smaller acreage. The crop at that time was 75 to 80 percent harvested.

W. F. Malone, who runs an elevator at Hammond, Kans., said that the largest acreage for several years was being grown in the Hammond area. The harvest was almost complete when I was there, but the previous week trucks had been backed up all over town waiting to unload at the elevator. This is like scenes I have seen many times in the heaviest soybean growing areas.

* * * *

A surprise for me in eastern Kansas is the lack of elevator storage space. I expected to see Kansas dotted with huge storage bins. There is a tremendous amount of wheat storage available in western Kansas. But in eastern Kansas most elevators load soybeans direct from truck to freight car. I was told that 50 carloads of beans had been shipped out of Prescott.

The Girard processing plant has storage space for 240,000 bushels. And Farmers Union at Columbus can store 100,000 bushels, but stores more wheat than soybeans. But these were the only substantial storage I saw in eastern Kansas. It is obvious that more storage is needed before a stable marketing situation can prevail in the area.

* * * *

In all three states I heard much complaint of shattering due to the extreme dry weather before and during harvest. Dwight Dannen at St. Joseph estimated the loss as high as five bushels per acre.

Shattering Troubles

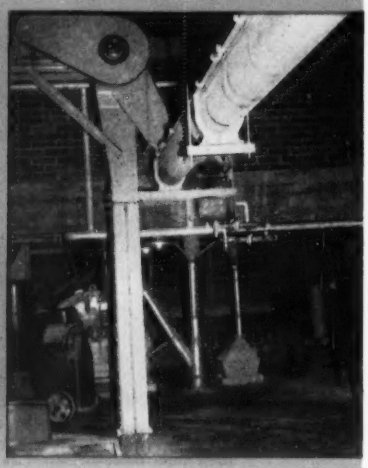
And from Columbus in extreme southern Kansas into Oklahoma I was told that the lower part of the bean plant was often grass green while the top was so dry as to be shattering out. Such uneven ripening was a result of the drought. It is not hard to grasp the harvesting and storing problem this involved.

At Miami, Okla., I saw a sample of soybeans that had a considerable admixture of green beans with dry ones. I saw the same thing later in Arkansas.

There was considerable worm damage in the same area. Green clover worms and cornear worms apparently were causing the trouble. I saw many pods with one bean eaten

STORAGE. Farmers Union has 100,000 bushels storage for soybeans and wheat at Columbus, Kans. Francis Johnson is manager.

Tapping the Conveyor Market



Beans, meal and oil are all moved by conveyors of various types.

The economical and sure way of reaching each and every one of the users of conveyors in the soybean processing industry—without fuss and fumbling—is through the pages of the Soybean Digest.

Moving the huge volume of soybeans and soybean products through the nation's 260 soybean processing plants are various types of conveyors. In each processing plant you will find hundreds of feet of screw or belt conveyors, chain drag conveyors, or belt and bucket lifts, ALL RECEIVING HEAVY, CONSTANT USAGE.

In a solvent extraction plant the single operation of moving the raw flakes to and from the extraction tower requires several hundred feet of conveyor. In a screw press plant the beans, the meal and the oil are all moved by conveyor.

Conveyors in processing plants need frequent replacement. Average life of a screw conveyor in such a plant is only 2 years.

Conveyors are also widely used by other segments of the soybean industry.

COUNTRY ELEVATORS use from 100 to several hundred feet of screw conveyors to fill and drain their storage bins. Larger plants and terminal elevators use belt conveyors also.

SOYBEAN PRODUCERS are rapidly expanding their usage of screw conveyors for filling and emptying bins and for moving feed to livestock feed bunks. Producer-readers of the Digest report also that they employ belt and bucket lifts, pneumatic conveyors and belt conveyors in their operations.

PRODUCERS OF CERTIFIED SOYBEAN SEED are extensive users of conveyors in their operations. One Southern seedsman reports 130 feet of 18-inch belt conveyors and 110 feet of screw conveyors in his plant.

You need the Soybean Digest to help you reach these large markets for conveying equipment. The Digest goes into every processing plant in the nation. It is read by the outstanding producers of the crop,* by leading grain handlers and many others in the industry.

* Average acreage operated by Digest producer-readers 560.

Address Inquiries to

THE SOYBEAN DIGEST

Hudson, Iowa

from each pod by the cornear worm.

In Oklahoma I saw fields of Ogdens that had been caught by frost the first week in October. I was told that caterpillers had stripped the foliage and delayed the maturity.

* * * *

A wide range of varieties is grown, from Lincoln in northern Kansas and Missouri to Ogden in extreme southeastern Kansas and Oklahoma.

S-100 is the leading variety in much of southern Kansas and southern Missouri. The acreage has been increasing there the last several years. It seems to be well liked most places, but there is complaint against it for its low oil content. There was some interest in the new Perry as a replacement for S-100.

In some areas the older variety, Hongkong, is still the most extensively grown. You also find Chief, Wabash and even Mammoth Yellow. In Oklahoma some Ralsoys are being grown.

The Lincoln and Ogden territories almost overlap at Girard.

* * * *

The Missouri River flood of the past season put farmers on the bottom land between St. Joseph, Mo., and Atchison, Kans., into the soybean business. Many of them are in to stay.

I talked to T. C. Riley of St. Joseph. He said the high water flooded out his wheat. It stood two feet deep in his house. He said he planted beans almost as soon as the water went down. The fields were still almost too slippery to get a tractor over them. He got a good crop from 75 acres. He will grow very little wheat this coming year, but mostly soybeans.

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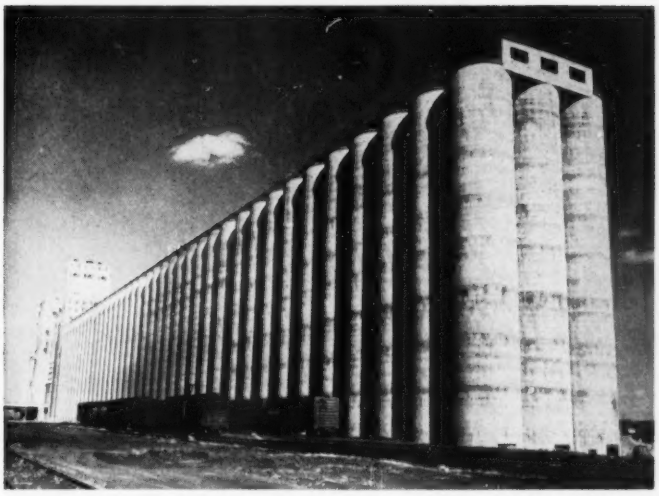
EAST CAROLINA CROP

The eastern Carolina soybean harvest got underway during the latter part of October with a higher quality of beans than usual being combined, reports Southern Planter.

Growers reported ideal harvesting weather and a moisture content of only 12 to 16 percent. They also reported yields of 25 to 30 bushels on their better fields but said the average yield was low last season due to the long continued dry spell during the growing season.

Staley Completes New Elevator Wing



Staley's 5-million-bushel storage.

This new "wing" to the A. E. Staley Manufacturing Co.'s elevator system, completed in time for last fall's soybean harvest, gives the Decatur, Ill., firm the world's largest completely mechanized elevator for handling corn and soybeans, with a total capacity of 11 million bushels of grain, the firm reports. The towering "bins" shown above have a storage capacity of 5 million bushels.

Boxcars are automatically tilted and emptied of grain which falls into pits from where the conveyor system takes it to the belt system on top of the structure. By means of these belts, a dispatcher working at a control board, routes the grain to the proper "bins." Similar belts at the bottom of the bins remove the grain for processing.

Nominees of Chicago Board of Trade

The Chicago Board of Trade nominating committee has made up its slate of recommendations as nominees to fill the various vacancies which will occur in the roster of officials of the Exchange early in 1953.

For president, it has nominated Sylvester J. Meyers, president of the Arcady Farms Milling Co. Meyers has already served eight years in an official capacity with the Board.

John R. Murray of the Quaker Oats Co. who has been first vice president during 1952 was renominated for the same position. For second vice president, Julius Mayer, executive vice president of the Continental Grain Co., was selected.

On the Directorate, William J. Walton of General Mills, Inc., and Raymond A. Gerstenberg, a partner in Gerstenberg & Co., were renominated for another three-year term each. In addition, Clarence M. Galvin, a partner with James E. Bennett & Co., James F. Wade, a partner with Lamson Bros. & Co., and Bernard P. Carey of Peter B. Carey & Co., were nominated to fill the other three vacancies on the Directorate.

Richard F. Uhlmann, president of the Uhlmann Grain Co., and Henry Stefany, with Francis I. duPont & Co., were renominated for places on the nominating committee. To serve two years on the committee on appeals: John T. Donahoe, Vincent M. Fagan, Thomas E. Hosty, Jr., Eugene N. Morris and Philip A. Rashman; and to serve like terms on the committee on arbitration: Ardin P. Buell, Samuel A. McMurray, John M. Rose, Marshall K. Smith and Edward F. Thompson, Jr.

The election will be held Jan. 19.

TO USE SRRL PROCESS

The Vern E. Alden Co., engineers, Chicago, has been granted a license by the U. S. Department of Agriculture for the application and use of the new cottonseed extraction process developed at the Southern Regional Research Laboratory. Before the license agreement was awarded, the 10-year-old engineering firm had developed and placed in actual operation new and special extraction processes using horizontal rotating filters. With these special processes it is possible to obtain better recovery efficiencies than have heretofore been obtained with available equipment.

The Vern E. Alden Co., which has also designed and constructed soybean solvent extraction plants, believes that the SRRL cottonseed extraction process has many advantages for application to the soybean industry.

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KELLOGG OFFICIAL

ROBERT B. JUDE

Robert B. Jude has been elected a vice president of Spencer Kellogg & Sons, Inc., it was announced by Howard Kellogg, Jr., president.

Jude joined Spencer Kellogg & Sons, Inc., in 1929, later served as manager of the edible oils department at Buffalo. He was a lieutenant in the U. S. Navy during the war.

On his discharge he took charge of Spencer Kellogg's soybean purchasing at Chicago. In 1943 he returned to Buffalo to manage a newly created department, oilseeds purchasing.

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BLAW-KNOX PROMOTES

CHARLES F. HAUCK

Chemical plants division of Blaw-Knox Construction Co., Pittsburgh, has announced the promotion of Charles F. Hauck to assistant sales manager of the division. In addition he will continue his duties as the division's manager of sales promotion.

In his new capacity Hauck will coordinate the sales efforts of the branch offices of the division at New York, Philadelphia, Birmingham, San Francisco, and Pittsburgh. He will also direct the sales efforts of the chlor-alkali department and the synthetic fuels and low temperature processes departments located in Pittsburgh.

Prior to joining chemical plants division a year ago, Hauck had 15 years experience in chemical engineering and wet processing industries.

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INSTITUTE'S STAND ON FROZEN DESSERTS

The Institute of Shortening and Edible Oils, Inc., in its Dec. 10 meeting at Chicago, adopted principles previously set forth by the International Association of Ice Cream Manufacturers on the use of food fats other than butterfat in frozen desserts, according to E. W. Brockenbrough, president.

The principles advanced by the ice cream manufacturers association and adopted by the shortening institute:

"1—The integrity of ice cream must be maintained by the exclusion of all fats and oils which are foreign to it.

"2—Where such a product may legally be sold, adequate provisions governing packages and servings, sufficient to inform the consumers of its true identity, must be required.

"3—Suitable regulations governing labeling and advertising of this product, which are designed to prevent confusion with ice cream and other dairy products, should be adopted and enforced.

"The Institute of Shortening and Edible Oils, Inc., representing processors of fats and oils, believes that the regulations and legal restrictions affecting the manufacture and sale of frozen desserts are of primary concern to the ice cream manufacturer and farm interests, but it stands ready to cooperate in efforts to expand the consumption of agricultural products," states the resolution.

"The members of the Institute of Shortening and Edible Oils, Inc., are obviously interested in any effort to expand the market for its finished products and hence the increased use of the food fats which are its source of raw materials.

"Frozen desserts made with wholesome fats other than milk fat are themselves wholesome, nutritious foods. When similarly made, except as to the fat used, they contain equal quantities of nutritionally desirable non-fat milk solids. The more widespread sale of frozen desserts will expand the consumption of these types of foods because of their lower cost to consumers. Their consumption will meet the health and nutrition needs of a wider consuming public."

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TO BUILD IOWA PLANT

A $600,000 solvent extraction soybean processing plant will be built by the Boone Valley Cooperative Processing Association at Eagle Grove, Iowa.

Ralph Olsen, president, has announced that construction would begin at once. The new plant is expected to be completed by next summer and will replace the present Expellers.

The new plant will have a 300-tons-per-day capacity. This compares with about 90 tons per day for the present equipment. The estimated cost of $600,000 includes 100,000 bushels of soybean storage.

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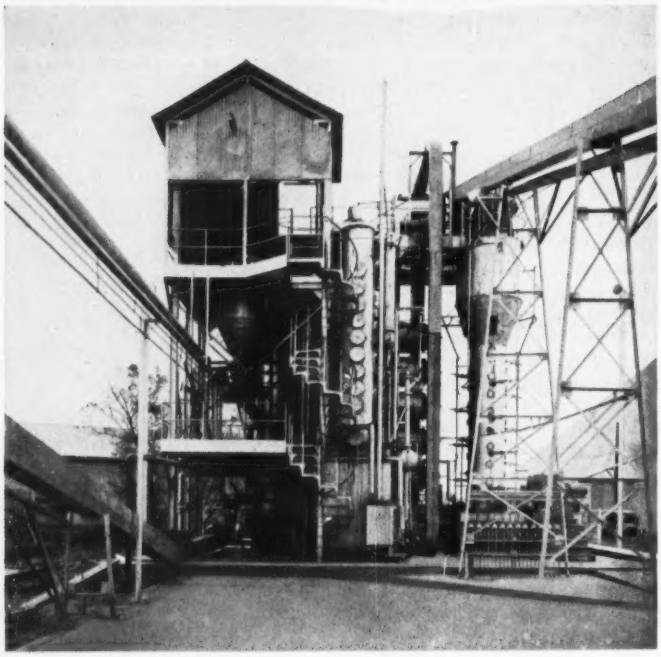
New Exsolex Plant at Marks, Miss.



In May the Riverside Oil Mill Co., Marks, Miss., placed in operation a new series Exsolex* plant furnished by the V. D. Anderson Co., Cleveland, Ohio. The management reports that early runs in the plant have been very satisfactory. Although rated at 80 tons of soybeans within two weeks of starting date, production went up to 100 tons.

Although now running on soybeans, the mill also plans to operate on cottonseed at a later date. The Exsolex plant has a capacity of 130 tons of cottonseed, but due to certain limitations in lint equipment, capacity is presently rated at 120 tons.

William King Self, manager of the plant who planned the new mill, gets his progressive attitude naturally. His father, P.M.B. Self, in 1941 built the first all-new cottonseed oil mill to be erected in Mississippi within a generation. This mill was built around Expellers furnished by the V. D. Anderson Co. These machines have been converted to Pre-Expellers in the present Exsolex mill.

*Trade mark registered in U. S. Pat. Off. and foreign countries.

—sbd—

NEW A-C DEPARTMENT

The chemical processing machinery and the grain and chemical milling sections of Allis-Chalmers processing machinery department have been combined into the grain and chemical processing machinery section under the management of F. R. Gruner, according to an announcement by G. V. Woody, department manager.

In addition to his new post, Gruner continues as special assistant to Woody. He came to Allis-Chalmers in 1941 and has been associated with its processing machinery department.

H. K. Swan continues as manager of the grain and chemical milling group, and R. K. Prince as manager of the wood processing and chemical processing groups. Swan has been associated with Allis-Chalmers milling machinery activities since 1926; Prince with its wood and chemical processing operations since 1943.

F. R. GRUNER

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1952 Crop Now Estimated at 291 Million Bu.

Soybean production in 1952 is the second largest of record. The estimated 291.7 million bushels has been exceeded only by the 299.3 million bushels harvested in 1950 and is about 3 percent above the revised 1951 production of 282.5 million bushels, according to the U. S. Department of Agriculture's final report on the 1952 crop. The 1952 U. S. yield per acre of 20.7 bushels per acre is slightly below the 20.9 bushels last year, but is 1.6 bushel per acre below the record of 22.3 bushels in 1949.

An all time record total of 16.1 million acres of soybeans were planted for all purposes in 1952, about 2.5 percent more than in 1951. Of the total acreage planted, 87.2 percent was harvested for beans, 7.3 percent for hay and 5.5 percent was used for all other purposes.

The more than 14 million acres harvested for beans was about one-half million acres above 1951 and higher than in any previous year.

The 1952 soybean crop was planted under ideal conditions and made an excellent start. Drought over much of the Southern area dimmed prospects somewhat, although final yields were better than expected earlier in the season. In the Northern areas the growing and harvesting season was generally favorable.

Practically no rain fell during harvesting time and an unusually high proportion of the crop was combined during September and October.

The extremely dry weather during the latter part of the season caused considerable shattering in some areas. However, over much of the country, harvesting losses were less than usual.

The North Central states produced 250 million bushels of soybeans last year or about 86 percent of the U. S. total. Missouri and Kansas, in the Southern part of the area, were the hardest hit by the drought and yields for both were below last year although production was up because of the greatly expanded acreage.

SOYBEANS FOR BEANS

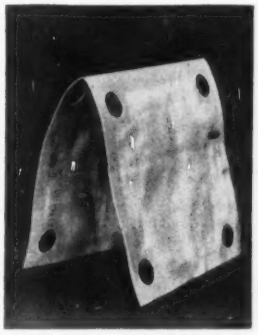
State	Acreage harvested (1) Average 1941-50	1951	1952	Yield per acre Average 1941-50	1951	1952	Production Average 1941-50	1951	1952
	Thousand Acres			Bushels			Thousand bushels		
N. Y.	10	7	5	15.8	18.0	17.5	149	126	88
N. J.	14	20	20	16.9	16.5	20.5	246	330	410
Pa.	28	22	19	15.8	17.0	19.0	435	374	361
Ohio	997	1,124	940	20.3	19.0	22.0	20,147	21,356	20,680
Ind.	1,391	1,706	1,638	19.8	22.5	23.5	27,718	38,385	38,493
Ill.	3,383	3,731	3,547	22.0	25.5	24.0	74,342	95,140	85,128
Mich.	99	120	92	17.4	20.5	19.0	1,687	2,460	1,748
Wis.	38	44	48	13.5	14.5	17.0	514	638	816
Minn.	572	1,077	1,155	15.4	17.5	19.0	9,145	18,848	21,945
Iowa	1,672	1,583	1,474	20.1	20.5	25.5	33,537	32,452	37,587
Mo.	697	1,290	1,724	16.8	20.0	19.0	12,438	25,800	32,756
N. Dak. (2)	11	28	29	(2)11.0	13.0	12.5	(2) 123	364	362
S. Dak.	26	60	85	14.0	14.5	15.0	349	870	1,275
Nebr.	32	58	88	17.8	22.0	26.0	546	1,276	2,288
Kans.	218	401	640	12.3	14.5	11.5	2,782	5,814	7,360
Del.	46	61	58	12.8	14.5	17.0	604	884	986
Md.	44	77	75	14.1	16.0	18.0	640	1,232	1,350
Va.	87	166	174	15.6	18.0	17.0	1,554	2,988	2,958
W. Va.	1	1	1	14.1	14.5	15.0	19	14	15
N. C.	243	309	290	12.8	16.5	16.5	3,142	5,098	4,785
S. C.	25	83	98	9.2	12.5	11.5	257	1,038	1,127
Ga.	13	21	32	8.4	10.5	10.5	117	220	336
Fla.		8	12		18.0	20.0		144	240
Ky.	90	136	114	16.2	19.0	15.5	1,502	2,470	1,767
Tenn.	91	183	181	15.9	17.5	20.0	1,603	3,202	3,620
Ala.	39	88	92	14.4	18.0	19.0	623	1,584	1,748
Miss.	148	425	455	15.0	13.0	13.5	2,508	5,525	6,142
Ark.	277	667	866	16.4	20.0	16.0	4,759	12,140	13,856
La.	31	38	41	13.4	17.5	14.5	416	665	594
Okla.	10	77	82	9.2	13.5	10.5	105	1,040	861
U. S.	10,249	13,545	14,075	19.4	20.9	20.7	202,068	282,477	291,682

(1) Equivalent solid acreage. (Acreage grown alone, with an allowance for acreage grown with other crops.) (2) Short-time average.

SOYBEANS FOR HAY

State	Acreage harvested Average 1941-50	1952	Yield per acre 1952	Production 1952	Soybeans Cut for Hay or Plowed Under 1952
	1,000 acres		Tons	1,000 tons	1,000 acres
N. Y.					2
N. J.	15	7	1.70	12	9
Pa.	38	15	1.65	25	3
Ohio	91	26	1.45	38	19
Ind.	261	69	1.35	93	21
Ill.	262	84	1.10	92	18
Mich.	11	4	1.40	6	9
Wis.	46	9	1.95	18	4
Minn.	55	6	1.55	9	36
Iowa	82	10	1.75	18	7
Mo.	96	55	1.20	66	45
N. Dak. (1)	1	1	1.20	1	1
S. Dak.	2				4
Nebr.					2
Kans.	12	35	1.05	37	28
Del.	14	7	1.35	9	2
Md.	24	15	1.45	22	4
Va.	56	33	1.30	43	46
W. Va.	23	7	1.60	11	1
N. C.	163	127	1.05	133	91
S. C.	24	33	.95	31	54
Ga.	44	56	.95	34	60
Fla.					2
Ky.	99	95	1.20	114	18
Tenn.	119	142	1.00	142	62
Ala.	163	68	.80	54	10
Miss.	178	130	1.05	136	65
Ark.	104	100	.90	90	30
La.	39	17	1.05	18	200
Okla.	8	39	.90	35	33
Tex.	6	1	.70	1	4
U. S.	1,994	1,171	1.10	1,288	890

(1) Short-time average.



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World 1952 Crop Forecast Over 671 Million Bu.

World soybean production in 1952 is forecast by the Office of Foreign Agricultural Relations at 650 million bushels—the second largest soybean crop of record. It was exceeded only by the 1950 harvest, now revised upward to 671.7 million bushels. Moreover, this volume of production represents a slight increase—roughly 10 million bushels or 1.5 percent—from last year's above-average outturn.

Over 90 percent of the estimated world production of soybeans is concentrated in the United States and the Chinese mainland. The remainder is grown in scattered areas, with the most significant production in Japan, Indonesia, Korea, Canada, and Brazil.

The increase from 1951 represents the expansion which is estimated for the free world on the basis of comparatively reliable information.

SOYBEANS: Acreage, yield per acre, and production in specified countries and the world, averages 1935-39, annual 1951-52 (1)

Continent and country	Acreage (2)			Yield per acre			Production		
	Average 1935-39	1951	1952 (3)	Average 1935-39	1951	1952 (3)	Average 1935-39	1951	1952 (3)
	1,000 acres			Bushels			1,000 bushels		
NORTH AMERICA									
Canada	(4) 10	155	172	21.3	24.8	24.0	(4) 207	3,843	4,128
United States (5)	3,042	13,211	13,906	18.5	21.2	20.8	56,167	280,512	289,268
EUROPE									
Italy	(6)	2	2	12.1	22.0	17.5	(4) 1	34	35
Yugoslavia	5	18		14.9	8.7		71	157	
Other Europe	93	95	95				1,067	588	487
U.S.S.R. (Europe and Asia)	(7) 607						(7) 5,805		
ASIA									
Turkey	(7) 1	6	6	29.0	11.4	12.5	(7) 37	73	75
China proper (22 provinces)	12,411			16.7			207,666		
Manchuria	8,992	6,600		16.8	16.7		151,294	111,150	
Japan	797	1,059	1,037	15.6	16.7	16.8	12,338	17,704	17,416
Taiwan (Formosa)	(4) 17			8.9			(4) 151	445	
Korea (8)	(4) 1,021	617		16.0	6.6		17,654	4,070	
Indonesia (9)	889	932	940	11.0	9.9	10.6	9,731	9,193	10,000
SOUTH AMERICA									
Brazil (10)		89	149		25.5	16.2		2,265	2,407
AFRICA									
Tanganyika								37	
Union of South Africa		12			7.5			92	55
Total excluding "Other Europe," U.S.S.R., Chinese Mainland and North Korea	5,670	16,295	17,035				87,190	319,860	329,440
World total (11)	29,000	36,360	37,100				463,720	640,480	650,000

(1) Years shown refer to years of harvest. Southern Hemisphere crops which are harvested in the early part of the year are combined with those of the Northern Hemisphere harvested the latter part of the same year. (2) Figures refer to harvested areas as far as possible. (3) Preliminary. (4) Average of less than 5 years. (5) Acreage harvested for beans. (6) Less than 500 acres. (7) One year only. (8) Beginning with 1951 figures represent South Korea only. (9) Java and Madura only. (10) Rio Grande do Sul and Sao Paulo. (11) Includes estimates for the above countries for which data are not available and for minor producing countries.

Office of Foreign Agricultural Relations. Prepared or estimated on the basis of official statistics of foreign governments, reports of United States Foreign Service officers, results of office research, or other information. Prewar estimates for countries having changed boundaries have been adjusted to conform to present boundaries, except as noted.

With reliable data lacking for the China mainland, the Soviet Union, North Korea and the Balkan countries, excepting Yugoslavia, esti-

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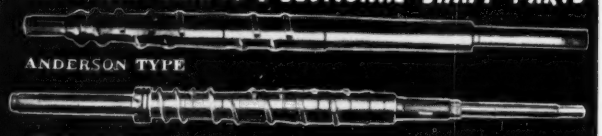

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mated output in these areas is largely speculative.

The areas of the free world account for over one-half of the estimated total soybean production. The United States alone has produced about 45 percent of the total in recent years compared with only about 12 percent in prewar years.

Canadian soybean production, currently confined to Ontario, has set a new record for the ninth successive year. Output is up 7 percent from last year and is 20 times the prewar volume.

European production is comparatively small and is concentrated almost entirely in the Balkan countries. The harvest in this area undoubtedly was down sharply because of severe drought throughout the season.

Soybean production and acreage in Japan declined by about 2 percent from the 1951 crop, which represented the highest level of production since the early 1920's. A gradual expansion in Indonesian soybean production has been reported.

Brazil harvested a record soybean crop in 1952 (May and June).

African soybean production continues to be relatively small.

—s b d—

HEYWOOD DIES

C. G. Heywood, London, England, world authority on fats and oils, died suddenly Dec. 30. He was formerly managing director of Pinchin, Johnson & Associates, Ltd., a British paint company.

Heywood paid two visits to this country after the war in his efforts to further expansion of British oilseed production. He appeared on the program of the American Soybean Association convention in 1951.

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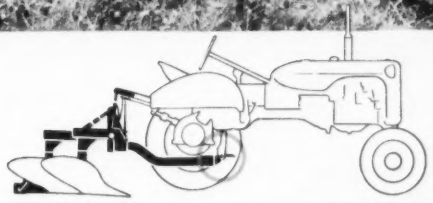

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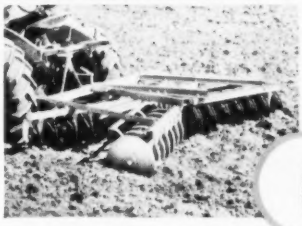

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FEEDING

Bean Meal and B-12

Many investigators have found that a high level of soybean oil meal in the diet tends to increase the growth of chicks on a vitamin B-12 supplement.

Investigators have shown that increasing the protein level in the diet of rats increases the response to vitamin B-12. This has led to the belief that vitamin B-12 in at least one of its functions is intimately concerned with the metabolism of protein.

On the other hand, there is evidence that vitamin B-12 plays an important role in carbohydrate or fat metabolism, and that nitrogen retention on vitamin B-12-deficient diets is not improved by supplementation with vitamin B-12.

The department of nutrition at Ontario Agricultural College has conducted an experiment in which the protein level of the diet was raised while an attempt was made to avoid altering the productive energy of the diet. Basal diets contained from 26 to 50 percent soybean oil meal.

The addition of corn oil and extra protein to a diet deficient in vitamin B-12 did influence the growth response of chicks.

The addition of 5 percent corn oil to a diet containing about 20 percent protein did not increase the response; and only a moderate increase occurred when the protein level was raised to approximately 30 percent with no added corn oil. But a greater than two-fold response was observed when both extra corn oil and protein were included in the diet.

INFLUENCE OF DIET COMPOSITION ON THE RESPONSE OF CHICKS TO VITAMIN B-12. By D. C. Hill and H. D. Branton, department of nutrition, Ontario Agricultural College, Guelph, Ontario. Poultry Science, September 1952. Vol. 31, No. 5.

Fat Needs of Chicks

Semi-purified "fat-free" diets have been used to study the fat requirements of the chick in studies at Iowa State College. One diet contained vitamin-test casein while the other contained Drackett industrial soy protein. Each diet contained adequate levels of all known vitamins.

The soy protein basal diet produced 20 percent greater growth of chicks than the casein diet.

When the casein diet was supplemented with a crude linoleic acid concentrate at levels as low as 0.83 percent, symptoms resembling nutritional encephalomalacia and high mortality resulted after two weeks. High levels of corn oil and soybean oil did not produce these adverse effects.

The adverse effects obtained with casein protein and the linoleic acid concentrate were not observed when the concentrate was included in the soybean protein basal. In fact, a 20 percent increase in chick growth resulted.

Supplementing the soybean protein basal diet with either crude corn oil, refined corn oil, soybean oil, wheat germ oil, oleic acid concentrate or linoleic acid concentrate stimulated chick growth as much as 30 percent. The oleic acid concentrate was superior to other oils in promoting growth.

Either the chick has a dietary requirement for specific fatty acids, or for an unknown vitamin(s) present in vegetable oils, or both.

UNIDENTIFIED GROWTH FACTORS IN VEGETABLE OILS AND FATTY ACID CONCENTRATES. By Donald S. Carver and Elton L. Johnson. Poultry Science, September 1952. Vol. 31, No. 5.

Antibiotics, Proteins

Antibiotics do not have a sparing action on either the carbohydrate or protein requirements of the chick, according to research at the University of British Columbia.

Work at that University indicates that antibiotics give best results with rations that are well balanced in amino acids.

In order to take full advantage of the growth stimulating properties of antibiotics, a high-energy and optimum-protein diet should be fed.

THE EFFECT OF FEEDING ANTIBIOTICS ON THE CARBOHYDRATE AND PROTEIN REQUIREMENTS OF THE CHICK. By J. Biely, B. E. March and D. F.

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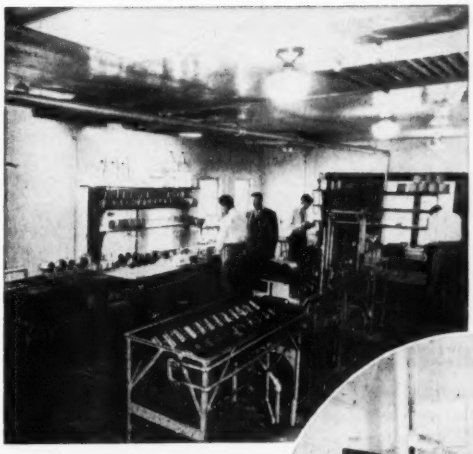

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Smith, poultry nutrition laboratory, University of British Columbia, Vancouver, B. C., Canada. Poultry Science, September 1952. Vol. 31, No.

Meal for Turkeys

Turkeys have been raised successfully from hatching to market weight with diets in which wheat was the only cereal grain and soybean oil meal the only protein supplement in experiments at Ontario Agricultural College.

The Ontario workers have investigated the effects of various levels of soybean oil meal in the diet for poults when the antibiotic penicillin is fed. It appeared that a level of 26 percent protein in the starting diet was adequate when no penicillin was fed, but a somewhat higher level was effective when the birds received the antibiotic.

EFFECT OF PENICILLIN ON THE GROWTH OF TURKEYS FED DIETS OF VARYING PROTEIN CONTENT. By S. J. Slinger, A. M. Morphet, K. M. Gartley and D. Arthur. Poultry Science, September 1952. Vol. 31, No. 5.

The Protein Level

Workers at Ontario Agricultural College suggest that heavy-breed male broilers be fed diets containing over 20 percent protein during the growing period, and that the level be reduced to 20 percent or less for a finishing period of a few weeks.

EFFECT OF ANTIBIOTICS ON THE PROTEIN REQUIREMENT OF BROILERS. By S. J. Slinger, J. E. Bergey, W. F. Pepper, E. S. Snyder and D. Arthur, departments of poultry husbandry and nutrition, Ontario Agricultural College, Guelph, Ontario. Poultry Science, September 1952. Vol. 31, No. 5.

Meal Plus Antibiotics

The growth response obtained with soybean oil meal plus antibiotics in chick rations was almost as large as that obtained with animal protein rations supplemented with antibiotics, in work at Cornell University. It was greater than with animal protein rations without antibiotics.

SOME RESULTS OF FEEDING ANTIBIOTICS TO CHICKENS. By G. F. Heuser and L. C. Norris, department of poultry husbandry, Cornell University, Ithaca, N. Y. Poultry Science, September 1952. Vol. 31, No. 5.

Tri Meal for Poultry

Experiments conducted with White Leghorns indicated that trichloroethylene-extracted, underheated soybean oil meals contain a substance or substances which significantly delay coagulation time of the blood of chicks fed these meals.

The clotting time returned to normal when chicks previously fed diets containing underheated meal were placed on a diet containing adequately heated soybean meal.

UNDERHEATED SOYBEAN OIL MEAL INCREASES BLOOD CLOTTING TIME OF CHICKS. By Stanley L. Balloun and Elton L. Johnson, Iowa State College, Ames, Iowa. Poultry Science, September 1952. Vol. 31, No. 5.

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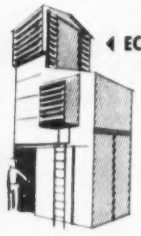
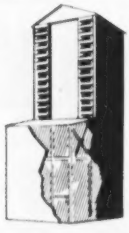

ECONOMY "10"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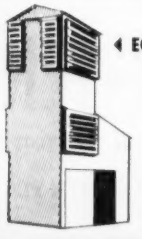
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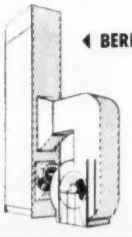
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Case Self-Propelled Combines are built with 9, 12 (above) and 15-foot headers. Pull types available in 5, 6, 9, and 12-foot models. All with choice of spike or rub-bar cylinder. Six-foot Model "A" shown below.

A cracked bean is a wasted bean and trash just adds to the dockage. Thousands of growers, therefore, have found it to their advantage to harvest their soybeans with Case Combines. Buyers, too, have often expressed a preference for Case-threshed seed because they have learned to expect a whole, clean product from Case Combines. Whether with spike-tooth or rub-bar cylinder, a Case Combine is easy to adjust for gentle, yet thorough threshing. Case straw racks are extra long to assure complete separation of valuable beans. And Air-Lift Cleaning, found only in Case Combines, gets rid of trash while saving the seed. **J. I. Case Co., Dept. A-75, Racine, Wis.**

CASE

Sees Expansion in Minnesota

Minnesota was one of the last states to develop the soybean crop, but the dollar value of the crop in that state has increased by 500 times in the last 10 years. Minnesota now ranks sixth in production.

After so rapid and so recent an expansion of the soybean industry in Minnesota it is not surprising that somebody in that state should take a look around and try to size up the future of the crop there.

Ray A. Goldberg of the University of Minnesota has written a book, The Soybean Industry, with special reference to the competitive position of the Minnesota producer and processor. He has considered the factors for and against the continued expansion of production and processing in the state. He concludes both will continue to expand, but at a slower rate.

The author points out the fact that the net return per acre of soybeans is higher than that from any other crop except corn; that adapted varieties are now available; and the Minnesota producer has excellent markets with Minnesota and Iowa processors, and a potential export market in Canada.

However, the crop is not yet a permanent part of the crop rotation on the average Minnesota farm. And of course it will be affected by developments in the U. S. and world markets.

Minnesota processors have the advantages of plentiful local supplies of soybeans, and excellent local markets for meal, states Goldberg. The state is not yet producing all the meal consumed by its livestock population.

They have good storage facilities. And in sales within the state as well as to western states or Canada they can take advantage of the Decatur-plus-freight price in the sale of meal, and the Chicago-minus-freight price in the purchase of beans.

However, processors are adversely affected by the low oil content of Minnesota soybeans, and the freight cost of shipping soybean oil to eastern markets.

The author points out that U. S. processing capacity has become overexpanded, and that some contraction is feasible. He believes, however, that processing expansion will continue to some extent in favorable locations such as Minnesota.

Goldberg holds a doctor of philosophy degree in agricultural economics from the University of Minnesota. He is a graduate of the Harvard Graduate School of Business Administration. He received a prize in the Uhlmann Awards Competition for research in grain marketing and agricultural economics, covering a portion of the work published in this book.

THE SOYBEAN INDUSTRY, WITH SPECIAL REFERENCE TO THE COMPETITIVE POSITION OF THE MINNESOTA PRODUCER AND PROCESSOR. By Ray A. Goldberg. 186 pages. $5. Order through Soybean Digest, Hudson, Iowa.

BOOKS

RAY A. GOLDBERG

New Edition by Snells

A new edition of Chemicals of Commerce by Foster Dee Snell and Cornelia T. Snell has been brought out by D. Van Nostrand Co. The book is designed to give in concise form the useful facts about any chemical sold in commerce.

The plan of the book is to give information on the composition of actual products as sold in commerce rather than the pure chemicals of a textbook.

The book is written as non-technically as possible for the use of manufacturers and others connected with the chemical industry.

Foster Dee Snell is president of Foster D. Snell, Inc., consulting chemists. Cornelia T. Snell is associated with the same firm.

CHEMICALS OF COMMERCE, second edition. By Foster Dee Snell and Cornelia T. Snell. 588 pages. $6.50. Order through Soybean Digest, Hudson, Iowa.

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The Elevators Have Problems, Too

To The Editor:

I have read with interest the articles in regard to the grading of soybeans and the pro and con of changing these grades. Also the effects of the present system of selling for export so far as the buyers in foreign countries are concerned.

May I suggest that some space be given to the problem of the country elevator in selling beans for export. For example, at the present time I have several cars of beans that were shipped for export based on weights and grades at the ports for which I have no returns. Most of these beans were shipped in October. Some as far back as the 16th of that month which is around 60 days.

As you know, there are a lot of things that could happen to these beans in that time. The net result of which loss, if such occurs, and I can assure you it does occur, the shipper stands. I have one such car now for which I received returns approximately 60 days after shipment showing a loss of which I have no idea I will be able to recover.

I know that the shipper is not obligated to sell for export but at the same time I feel that when he does that he should have assurance that the car of beans will be tested upon arrival and that test should relieve the shipper of any further liability.

I would like your views on this along with those of other country elevator operators who may have had the same sort of experience.—*Ray Gooduin, The Gooduin Co., Paragould, Ark.*

Hard to Understand

To The Editor:

We would like to congratulate you on your editorial in the December issue of the Soybean Digest, entitled "U. S. Standards Not Liked Abroad."

We have purchased 750,000 bushels of soybeans in the last two years from the United States and it is hard for us to understand your grading standards, which allow 3 percent dockage on soybeans. We actually have to pay the market price of soybeans on this dockage as well as the freight thereon and quite frankly, we do not like it.

If you can be helpful in revising your grading standards in any way at all, I think it would help your export market and it would certainly be appreciated by us.—*D. K. Friesen, general manager, Co-op Vegetable Oils Ltd., Altona, Manitoba.*

Why Is It a Problem?

To The Editor:

I would like to make a few comments on some of the editorials that have appeared in the Digest recently.

I cannot understand why weed seed and other foul material is or need be a problem in either domestic or foreign bean trade. When we sell beans at our local elevator they are run over a cleaner and we get the waste back. Why not adopt the practice in all sections of the country? It seems like that would settle the problem of quality.

And in regard to moisture discounts, our price is based on moisture content of 14 percent. We consider such beans as being perfectly safe for storage. Only occasionally and for short periods do we get the content down to 11 or 12 percent. If the base of 14 were lowered, it seems to me that we would be unjustly penalized. Why not retain the present base and pay a small premium for beans of lower moisture content?—*G. R. Roscoe, Greenwich, Ohio.*

—sbd—

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LETTERS

Protects your soybean seed from rot and decay; from storage insects, too, with Spergon-DDT.

Results: Sturdier plants — a greater yield of soybeans.

Advantages: Effective at economical dosages, safe on seed, easy to use, compatible with legume inoculants and most insecticides, relatively low cost per unit of seed treated.

Write for free "seed protectant" Bulletin #1 including latest seed treatment chart.

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manufacturers of seed protectants — Spergon, Spergon-DDT, Spergon-SL, Spergon-DDT-SL, Phygon Seed Protectant, Phygon Naugets, Phygon-XL-DDT, Thiram Naugets — fungicides — Spergon Wettable, Phygon-XL — insecticides — Synklor-48-E, Synklor-50-W — fungicide-insecticides — Spergon Gladiolus Dust, Phygon Rose Dust — miticides — Aramite.

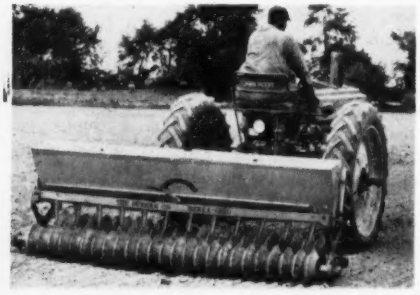
NEW PRODUCTS and SERVICES

GROMMET V-BELT. The "Texrope" grommet v-belt, for which 20 to 50 percent longer life is claimed, is described in a new bulletin released by Allis-Chalmers Manufacturing Co.

The "Texrope" grommet v-belt is the only belt made without a splice. According to the bulletin, it is cooler running, is shock absorbent, has one-tenth the shrinkage and one-third the stretch of other belts, offers less slip and more grip, and is 20 percent stronger.

Cross section illustrations show how the "Texrope" grommet v-belt provides a higher gripping pressure under all load conditions.

For copies of the bulletin, "'Texrope' Grommet V-Belts," 20B6497A, write Soybean Digest 1b, Hudson, Iowa.



SEEDER. Most packers or land rollers can be quickly converted to a seeder-packer with a new all-purpose seeder developed by Century Engineering Corp. The new Century seeder also will fit on most tractors so a disc or spike tooth harrow, rotary hoe or other tool can be trailed to seed and cover in one operation.

Grass, legume and small grain from seeds as fine as Red Top to those as large as soybeans, can be accurately sown with this new one-hopper unit. Seed can be applied at any rate from one pound to six bushels per acre.

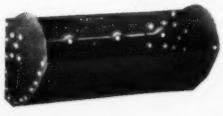
For further information write Soybean Digest 1a, Hudson, Iowa.

CONVEYING EQUIPMENT. A newly revised 28-page catalog of Rapistan conveying equipment covering an enlarged line of power and gravity conveyors, hand trucks, and industrial casters has just been published by Rapids-Standard Co. Several new equipment models are shown for the first time in the catalog.

For a copy of the catalog write Soybean Digest 1c, Hudson, Iowa.

A Sales Record of More Than

12 MILLION
SUPERIOR
ELEVATOR CUPS
DP-OK-CC-V



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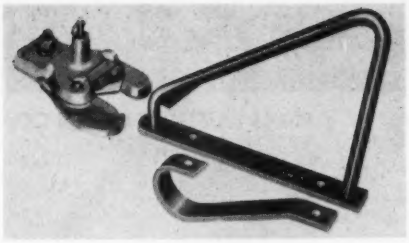


TRACTOR HITCH. Hitching up any farm implement to a tractor is actually a two-man job and a hazardous operation for one. The newly patented Spaulding tractor hitch enables the tractor operator to hitch and unhitch his different implements without ever leaving the tractor seat. The device is fully automatic. The farmer merely backs his tractor up to the implement and the hitch takes hold of the tongue bar raising it into position automatically and securing it. To unhitch the implement he simply pulls on a cord.

The hitch is easy to install on any make of tractor and farm implement. The action is quick. There's nothing to get out of order.

For further information write Soybean Digest 1c, Hudson, Iowa.

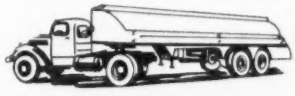
FOLD-OVER DISC HARROW. The new Dearborn Fold-Over disc harrow is two harrows in one. This versatile implement can be used as a tandem disc harrow or as a bush and hog harrow.

As a tandem disc harrow it is well suited for work in rough fields where there are large chunks of sod or clay. It also works well in bottom land, in heavily manured land, in trash, weeds and cotton land, in short, wherever penetration is difficult.

As a bush and hog harrow it can be used for chopping extremely tough surface trash, rank growth or heavy sod. It is also used for breaking sod land.

For further information write Soybean Digest 1d, Hudson, Iowa.

Ship By



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The Prater Rotary Airlock Feeder links your processing operation into a tightly-knit, smooth running circuit. It seals off the bottom discharge of dust collectors, preventing air from leaking into the collector and feeding dust out of the system as it is collected. It is also used to feed granular materials into the processing equipment against pressure—**at a pre-determined rate!**

If you're converting to the solvent method of extraction, be sure to include the Prater Pulverizer and Prater Rotary Airlock Feeders as part of the system. With them, Prater offers years of experience serving the soybean industry, plus up-to-date recommendations to make your operation satisfactory in every respect.

The Prater Rotary Airlock is built in two sizes, 8" and 10", requiring 1/3 HP and 1/2 HP respectively. It is furnished as a complete "package unit" or may be purchased without motor.

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GRITS and FLAKES... FROM THE WORLD OF SOY

◆ Sales and advertising division of the Rapids-Standard Co., manufacturers of conveying equipment, is now located in Rapistan Bldg., 144 Trowbridge St. NW, Grand Rapids 2, Michigan. The sales engineering department is at 507 Plymouth Road.

◆ Hugh A. Hamilton and Charles Greve have been named directors of fatty acid sales, western territory and eastern territory respectively, for the chemical division of General Mills, Inc. Hamilton joined General Mills in 1947 as technical director of the Chemoil plant at Kankakee, Ill. Greve recently returned to General Mills after 21 months duty in Korea where he served as a major in the Corp of Engineers.

◆ James Norris, president of the Norris Grain Co., Chicago, which he established in 1910, died in Chicago Dec. 4. He was well known as a sportsman, especially as the owner of the Detroit Red Wings Hockey Team.

◆ *D. O. Andreas has been elected chairman of the board of Honeymead Products Co., Mankato, Minn. He was with Cargill, Inc., Minneapolis, as divisional vice president in charge of the vegetable oil division until last spring.*

◆ Norman E. Dewes has been appointed sales manager of General Mills, Inc., north central formula feed division. He has been assistant director of formula feed sales at Minneapolis, specializing in dairy feeding and management, since 1949.

◆ Robert W. Drury, Jr., will represent the Albemarle Paper Mfg. Co. in multiwall bag sales in Kansas, Missouri and eastern Colorado. His office will be in Kansas City. Jeff M. Johnson will represent Albemarle in the Iowa-Nebraska territory, with his headquarters in Omaha.

◆ Three buildings are under construction at the feed mixing plant of Allied Mills, Inc., at Mason City, Iowa. They will house office, laboratory and warehouse. The plant will have a capacity of between 10,000 and 15,000 tons of manufactured feeds a month.

◆ *On the recent appointment of Oliver M. Smith as manager at Minneapolis for Bemis Bro. Bag Co., G. R. Knauer succeeded him as sales manager. Knauer has been with Bemis since 1948.*

◆ Pillsbury's Best Feeds now are going into the field in a completely redesigned bag. Clyde H. Hendrix, Pillsbury vice president, and George O. Morris, director of feed advertising and sales promotion, introduced the new bag at a recent series of sales meetings.

◆ Ralston Purina Co., St. Louis, is continuing its Research Fellowship Awards program for the 1953-54 school year, according to J. D. Sykes of Ralston Purina. Purpose of the awards is to help train leaders who are needed in the scientific fields of livestock and poultry production.

JOINS LAUHOFF GRAIN CO.

FORD M. FERGUSON

Ford M. Ferguson became associated with the Lauhoff Grain Co., Danville, Ill., Jan. 1, Howard J. Lauhoff, company president, announces. His headquarters are in the Chicago Board of Trade Building where he will be in charge of sales and procurement.

Ferguson has been associated with grain marketing and soybean processing for many years, having been assistant vice president of Cargill, Inc., of Minneapolis, and recently has been vice president in charge of trading of the soy products division of the Glidden Co.

Lauhoff has under construction a soybean extraction plant scheduled for completion in the spring.

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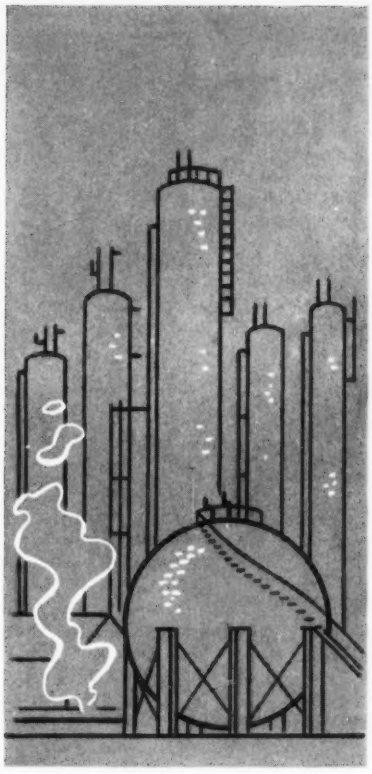

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◆ H. L. Dannen, Dannen Mills, Inc., St. Joseph, Mo., has announced the expansion of the formula feed sales department of the company and the appointment of Jack W. Bannister as general sales manager. He has moved to St. Joseph from Indianapolis where he headed the feed department of Acme-Evans Co., Inc.

◆ James T. Akehurst has been elected assistant vice president of operations for Archer-Daniels-Midland Co. He will assume the responsibilities of E. W. Schmidt, vice president and general superintendent, who is taking an extended leave of absence because of illness. Akehurst was named general superintendent of ADM's oil refining operations last April.

◆ Roy Clinton Jones of the Fulton Bag & Cotton Mills was awarded an honorary life membership in the Southern Seedsmen's Association at the group's annual convention in Miami Beach, Fla. Jones, who began his business career with Fulton Bag in 1920, has been prominent in seed association activities in the Southern states since 1941.

◆ *Centrico, Inc., importer and distributor of separators and clarifiers, announces the removal of its facilities to 75 West Forest Ave., Englewood, N. J.*

◆ The 1952-53 Year Book of the National Soybean Processors Association, 3318 Board of Trade Bldg., Chicago 4, Ill., is off the press. It contains the constitution, bylaws, code of ethics, officers, committees, members, trading rules and other trade information.

◆ The Sharples Corp., Philadelphia, has announced that it has contracted to handle the Chayen fats and oils extraction process devised in Great Britain. The process is based on a new principle, impulse rendering. Sharples will sell, engineer and install the process in North America.

◆ Mrs. John W. Evans, Montevideo, Minn., wife of the Minnesota director of the American Soybean Association, died at the Eitel Hospital in Minneapolis following two weeks' illness Dec. 1. Interment was in the Montevideo cemetery Dec. 5. Mrs. Evans was well and favorably known to many members of the American Soybean Association and their wives as she was a frequent attendant at the conventions with her husband.

◆ *Bud E. Simonton has been appointed superintendent of the Toledo factory of the Chase Bag Co. He has had many years experience in the paper bag industry, and was formerly associated with Union Bag Co. and St. Regis Paper Co.*

◆ Kent Feeds, Muscatine, Iowa, is introducing a new product for young beef and dairy calves, Jan. 15. It is a complete ration exceptionally high in vitamin A and other vitamins. It also contains a high level of antibiotics to promote growth and control scours in calves. A contest to select the name of this new feed is now in progress among Kent dealers and employees.

◆ Appointment of Dr. Max Jeter as director of nutrition and research for the feed mill division of the Glidden Co. has been announced. He succeeds C. K. Shuman, who has resigned to devote his full time to private interests.

JOINS McMILLEN

DR. W. W. CRAVENS

Dr. W. W. Cravens, professor of poultry husbandry, University of Wisconsin, has been appointed director of feed research and nutrition for McMillen Feed Mills, division of Central Soya Co., Inc., according to an announcement by Fred W. Thomas, president of the company. Dr. Cravens assumed his new duties with the makers of Master Mix feeds on Jan. 1.

In 1950 Dr. Cravens won the $1,000 American Feed Manufacturers Association Award for his studies in the role of vitamins and proteins in the nutrition of chickens, particularly as regards vitamin B-12, biotin and folic acid.

His more recent research has included studies on the effect of vitamin B-12 supplements and antibiotic feed supplements on egg production and hatchability, the amino acid requirement for egg production and hatchability of hens, and the relationship between antibiotics, vitamin B-12 and choline and methionine in chick growth.

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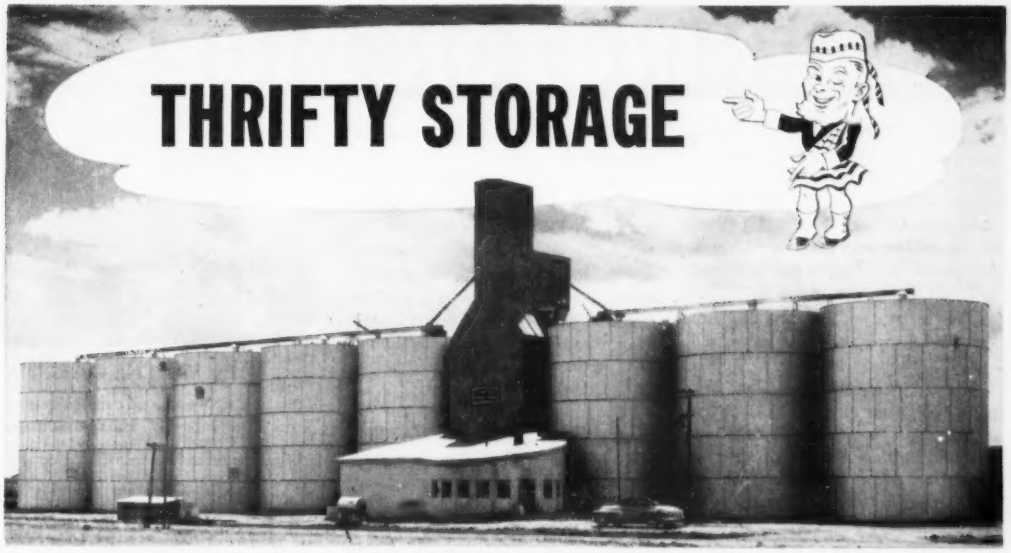

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WASHINGTON DIGEST

By WAYNE DARROW

Washington Correspondent for
The Soybean Digest

1953 GOAL. Another record crop of soybeans in 1953, possibly passing the 300-million-bushel mark, would be no surprise to USDA officials although they have asked farmers to cut the crop back to 13.5 million acres—575,000 acres less than in 1952.

The USDA goal aims at a 277 million bushel crop this year, compared to 292 million bushels in 1952.

The reduced goal reflects the composite judgment of all USDA experts on the supply and demand situation, and our production needs. Here's how the "goals" group viewed the supply-distribution situation:

	1951-52 (Actual)	1952-53 (Indicated)	1953-54 (Goal Basis)
SUPPLY:	(All figures in million bu.)		
Beginning stocks, Oct. 1	4.2	4.0	4.0
Production	282.5	292.0	277.0
Imports			
Total	286.7	296.0	281.0
DISTRIBUTION			
Crushings	244.3	250.0	235.0
Feed (as whole beans)	3.0	3.0	3.0
Other disappearance	.3		
Seed	19.1	19.0	19.0
Total Domestic	266.1	272.0	257.0
Exports (whole beans)	17.0	20.0	20.0
Total Disappearance	283.1	292.0	277.0
ENDING STOCKS (Sept. 30)	3.6	4.0	4.0
ACREAGE HARVESTED			
1000 Acres	13,545	14,075	13,500
Yield, bu. per acre	20.9	20.7	20.5

CONVERSION FACTORS

For 1950, 9.7 lbs. oil from 1 bu. of soybeans
1951, 9.9 lbs. oil from 1 bu. of soybeans
1952, 10.0 lbs. oil from 1 bu. of soybeans
1953, 10.0 lbs. oil from 1 bu. of soybeans

OUTLOOK. Regardless of soundness of goal calculations, it is price outlook that influences plantings—not goals. Consequently the prospect is for soybean plantings as big as 1952 in the Midwest and even bigger than 1952 in the cotton South.

Soybean prices at planting time are likely to be 1.9 times, or more, corn prices.

The 15 percent cut in the spring pig crop strengthens the probability of the big Midwest soybean acreage. Crop reporting board estimates the smallest spring pig crop since 1938—48 million pigs saved. That is 23 percent under the 62 million head produced in the spring of 1951—the peacetime record. The 1952 fall pig crop was also smaller than farmers' intentions last June.

Total corn consumption by hogs will be off around 70 million bushels out of the 1952-53 corn supply.

Since hog and broiler producers are the two biggest users of bean meal, a somewhat reduced demand for meal can be expected in 1953-54. This may be partly offset by higher hog prices, and by the uptrend in rate of meal feeding.

USDA has again asked for increased corn acreage—85 million acres compared to 82.7 million acres last year—but farmers haven't planted up to the goals in the past and are unlikely to meet this one in 1953.

The smaller pig crop should strengthen livestock prices. There will be more beef, but hardly enough to offset lower pork production. Total 1953 red meat supply probably will be no larger than in 1952.

Soybean production in the South may make a major upturn this year. Cotton prices are off 6 cents from a year ago. Cotton exports are off and officials are hopefully predicting they'll go to 4 million bales compared to 5.5 million bales in 1951-52. There will be at least a million bale increase in carryover.

USDA wants cotton production cut from 15 million bales in 1952 to 13 million this year. That means 3,660,000 fewer acres of cotton. The lower prices make some such acreage cut a probability. Some of the cotton acreage is sure to be put in soybeans.

Geographic shift in soybean production was pronounced last year and is reflected in acreage and production in 15 high-producing states.

1951 Rank	State	Acres in Thousands 1951	1952	Yield per Acre 1952
1	Illinois	3,731	3,547	24.0
2	Indiana	1,706	1,638	23.5
3	Iowa	1,583	1,474	25.5
4	Missouri	1,290	1,724	19.0
5	Ohio	1,124	940	22.0
6	Minnesota	1,077	1,155	19.0
7	Arkansas	607	866	16.0
8	Mississippi	425	455	13.5
9	Kansas	401	640	11.5
10	N. Carolina	309	290	16.5
11	Tennessee	183	181	20.0
12	Virginia	166	174	17.0
13	Kentucky	130	114	15.5
14	Michigan	120	92	19.0
15	Alabama	88	92	19.0

Interestingly, declines occurred in areas of higher yields and increases came in areas of lower yield, so we've included 1952 yield in the preceding table.

SUPPORTS. Soybeans, along with other major crops, have been assured price support in 1953 at or near their 1952 levels by announcements of outgoing Secretary of Agriculture Brannan.

The farm law requires 90 percent of parity support through 1953 and 1954 for wheat, corn, cotton, peanuts, rice and tobacco. President-elect Eisenhower pledged himself to stick to this.

Soybeans are in a class left entirely up to the discretion of the Secretary of Agriculture. The Secretary may support any product at any level he deems needed to get production.

Cottonseed support may be the first major price support problem to come before Secretary Benson. Cottonseed has been supported two years at 90 percent of parity, entirely on the Secretary's say-so. CCC buys products in a package deal from crushers who certify the seed was bought at the support level.

The CCC has acquired a large stock of cottonseed oil under the program which may be half the U. S. supply of edible vegetable oils by next July. Benson could reduce or eliminate this program for the 1953 cotton year if he chooses.

The accumulation of edible oils was the chief reason USDA asks smaller soybean production in 1953.

DRYING OILS. Soybean oil use in drying oil products is reported up moderately in 1952 although total use of vegetable oils was running 20 percent below the previous year at the end of the first 10 months. The soybean oil gain, while others were losing out, is attributed to lower priced soybean oil in relation to linseed oil in 1952 as compared to 1951.

A study of Flaxseed and Linseed Oil recently released by the U. S. Tariff Commission—one of a series on defense materials—gives attention to the increasing importance of soybean oil in the drying oil field.

Soybean oil has come up from 3.8 percent of total vegetable oils used in 1937-40 to 4.6 percent in 1941-45, and to 15.5 percent in 1946-50. The moderate 1952 gain, while other oils are falling off, may put it percentagewise well back up to the 22 percent mark achieved in 1949, the peak year. Final comparable figures aren't available yet.

Here's how soybean oil use in drying oil products has increased, in pounds and percent of total, according to the Tariff Commission study:

	Quantity (1000 lbs.)	Percent of total
1937	18,828	2.2
1941	62,410	5.8
1946	66,925	7.1
1947	158,107	15.6
1948	161,923	15.0
1949	200,308	22.1
1950	184,253	17.7
1951	147,553	13.5

EXPORTS. A survey of stocks, requirements and U. S. sales possibilities in the eight West European countries using most U. S. fats and oils will be made by Paul E. Quintus of the Office of Foreign Agricultural Relations before he returns from a short trip to Europe.

Quintus takes a bagful of problems with him. His trip was initiated by the USDA livestock advisory committee because of extremely low lard and tallow prices. Vegetable and fish oil problems have been added. He will make a general survey, bringing up to date a study of European fats and oils markets originally made by Dr. E. M. Norton of USDA in 1949.

There are signs that Japan, which normally takes 300,000 tons of soybean oil from the U. S. and Manchuria but fell far short of that in 1952, will increase these imports in 1953, and exceed its normal imports.

Market Street

We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

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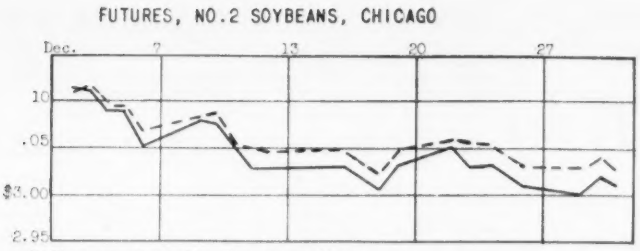

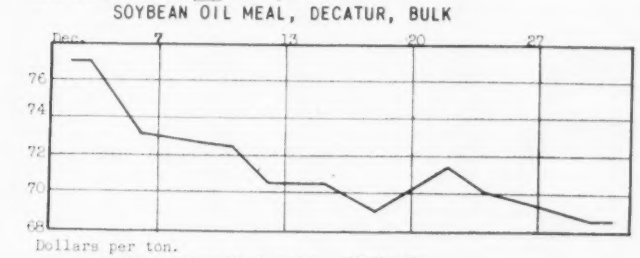

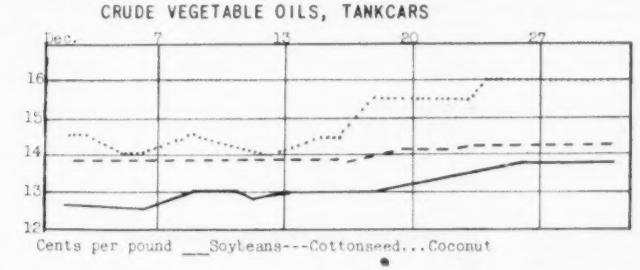

Beans, Meal Weaker; Oil Stronger

Bean and meal markets both weakened in December but soybean oil continued the upward trend begun in late November. Meal hit a new low for the year, soybean oil a new high.

The continuing slow mixed feed demand, the fact that processors are well supplied with soybeans after the heavy fall run, and that feed mixers bought up a supply of meal early in the season, all contributed to market slowness.

But pre-holiday doldrums are normal. Meal has lost ground in five of the last seven Decembers.

SOYBEANS. Both country offerings and processor demand were light in December. Growers who wished to sell had unloaded earlier.

But there was expectation of some movement of beans in January and February to pay income taxes. Otherwise, the trade says it will take $3 to the farmer to draw beans out of storage.

G. L. Jordan, University of Illinois economist, predicts $2.85 to $2.90 to Illinois farmers in January; possibly $3 in June. (He has shaved his prediction 10 cents since last fall.) He estimates the season's average bulk Decatur meal price at $76, and oil at 12½ to 13 cents.

SOYBEAN OIL MEAL. Mild weather has definitely cut meal consumption. Observers are cautious about predicting much improvement in demand, for perhaps 45 days.

Record supplies of feedstuffs and slightly smaller livestock numbers are in prospect.

Well over half the processors responding to our questionnaire were operating at capacity Jan. 1. Others were operating at 70 to 90 percent.

SOYBEAN OIL. The export market is a big factor in current strength. With a small olive crop and high olive oil prices, foreigners are interested in cheaper soybean oil.

The government's support program for cottonseed has strengthened soybean oil. And processors are holding out for higher prices because of the weakness in meal.

THE MARKETS

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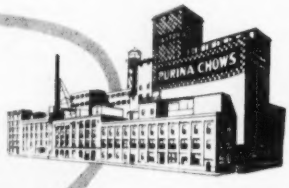

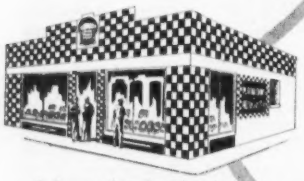

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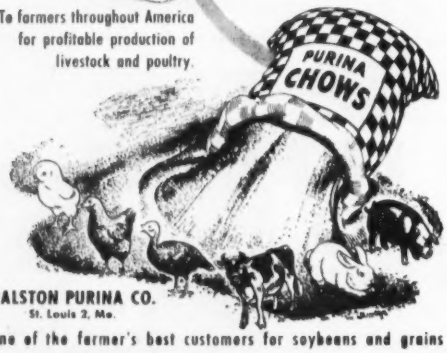

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One of the farmer's best customers for soybeans and grains

CASH PRICE TO FARMERS FOR NO. 2 SOYBEANS DEC. 29

Arkansas	$2.75
Illinois	2.80 & 2.82
Iowa	2.68 & 2.75
Minnesota	2.63 & 2.65½
Missouri	2.69 & 2.80
Ohio	2.80
Tennessee	2.75

RETAIL CASH PRICE BAGGED SOYBEAN OIL MEAL DEC. 29

Arkansas	$84.00
Illinois	85.00 & 90.00
Iowa	87.00 & 100.00
Minnesota	81.00 & 87.00
Missouri	90.00 & 92.00
Ohio	83.00
Tennessee	80.00

FUTURES TRADING AND OPEN CONTRACTS IN SOYBEAN OIL MEAL AND SOY CONCENTRATES ON MEMPHIS MERCHANTS EXCHANGE CLEARING ASSOCIATION (in tons bulk)

	Soybean Oil Meal		Soy Concentrate	
	Volume of Trading	Open Contracts	Volume of Trading	Open Contracts
Nov. 28	4,000	67,500	100	10,100
Dec. 1	3,600	69,300	1,000	9,100
Dec. 2	5,400	71,000	500	8,700
Dec. 3	4,500	71,400	1,200	7,700
Dec. 4	5,300	72,000	300	7,400
Dec. 5	4,600	72,200	100	7,300
Dec. 8	9,800	75,900		7,300
Dec. 9	7,600	75,300		7,300
Dec. 10	5,600	76,600	100	7,100
Dec. 11	8,200	78,000	400	6,900
Dec. 12	5,500	80,300	1,100	6,000
Dec. 15	3,400	80,500		6,000
Dec. 16	6,200	82,300	100	5,900
Dec. 17	6,000	81,900		5,900
Dec. 18	5,100	82,700		5,900
Dec. 19	5,000	82,700	500	5,600
Dec. 23	5,800	84,100	400	5,200
Dec. 24	2,600	84,000		5,200
Dec. 26	4,600	83,900		5,200
Dec. 29	5,400	83,300	100	5,200
Dec. 30	6,700	83,900		5,200
Total for 21 days reported	114,300		5,900	

● **SHORTENING.** Standard shortening shipments reported by the Institute of Shortening and Edible Oils, Inc., in pounds:

Nov. 29	4,422,565
Dec. 6	5,121,896
Dec. 13	5,135,131
Dec. 20	4,538,713

● **SUPPLIES.** Supplies of soybeans for 1952-53, currently estimated at 293 million bushels, will be the second largest of record, reports grain branch, Production and Marketing Administration. This is an increase of 3 percent over the supplies of last season.

Crushings of soybeans during the 1951-52 season totaled 244

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million bushels or about 7 million less than the previous year's record.

Exports of soybeans last season totaled a little under 17.1 million bushels. This compares with 27.8 million exported in 1950-51 and 13.1 million in 1949-50.

Of the exports last season, 4.6 million were shipped to Japan, 4.2 million to Canada, 2.2 million to Formosa, 1.5 million each to the Netherlands and Belgium, 1.4 million to France, .7 million each to Norway and Israel, and smaller amounts to other countries.

Exports of soybean oil last season totaled 264.5 million pounds compared with 490 million pounds for 1950-51.

Soy flour exports last season totaled a little over 8 million pounds compared with 7.4 million pounds for 1950-51.

● **MEAL, CAKE SUPPLIES.** Supplies of oilseed cake and meal for feed in 1952-53 are expected to be a little under the record of 9.1 million tons fed last season, according to grain branch, Production and Marketing Administration. Larger soybean oil meal supplies are not expected to offset the reduction in cottonseed meal supplies.

The record supplies last season were due in part to record imports of cottonseed and copra meal as well as to smaller exports. Exports of oilseed meals during 1951-52 totaled 86,000 tons as against 248,000 in 1950-51. Imports totaled 390,000 tons last season as against 207,000 tons the previous season.

Supplies of soybean oil meal for 1951-52, at 5.6 million tons, were only a little below the previous season.

● **MARGARINE.** Production of margarine in the first 10 months of 1952 was greater than production of butter for the first time, and was over 24 percent more than margarine production for the same period in 1951, according to Bureau of Census figures.

The report shows 1,049,199,000 pounds of margarine were produced in the first 10 months of 1952, compared with 845,122,000 pounds in the same period of 1951. Creamery butter production was 1,033,425,000 pounds in the same period.

● **STOCKS.** Production and Marketing Administration's commercial grain stock report.

U. S. Soybeans in Store and Afloat at Domestic Markets (1,000 bu.)	Dec. 1	Dec. 8	Dec. 15	Dec. 22
Atlantic Coast	1,372	1,260	1,424	1,412
Gulf Coast	2,107	2,111	1,919	2,069
Northwestern and Upper Lake	631	532	449	444
Lower Lake	3,078	3,688	2,827	2,517
East Central	2,930	2,863	2,737	2,594
West Central Southwestern & Western	6,044	5,936	5,839	5,792
Total current week	16,162	16,390	15,195	14,828
Total Year ago	11,197	10,136	10,273	9,540
U. S. Soybeans in Store and Afloat at Canadian Markets				
Total Current week	734	967	967	967
Total Year ago	162	162	162	162
Total North American Commercial Grain Stocks				
Current week	16,896	17,357	16,162	15,795
Year ago	11,359	10,298	10,435	9,702

● **EXPORTS.** U. S. exports of soybeans and soybean oil for October, as reported by the Office of Foreign Agricultural Relations of the U. S. Department of Agriculture.

Soybeans	2,745,346 bu.
Soybean oil:	
Crude	9,062,478 lbs.
Refined, but not further processed	1,212,000 lbs.
Refined, deodorized and hydrogenated	31,514 lbs.

Converted to a soybean equivalent basis, the exports for October amounted to 3,806,758 bushels.

Port of New Orleans cleared over 5 million bushels of soybeans for export from July 1 through Nov. 30.

Production and Marketing Administration reports that the export program for soybeans totals 15 million bushels for the period December through February. Countries receiving soybeans are Belgium (24,000 tons); Formosa (30,000 tons); Israel (5,000 tons); Netherlands (20,000 tons); Norway (5,000 tons); others (20,000 tons). Figures are for January and February.

● **PRICE SUPPORT.** The U. S. Department of Agriculture reports that farmers put a total of 5,708,692 bushels of soybeans under price support as of Nov. 15.

Of this amount 2,317,410 bushels were stored on farms, 3,328,362 bushels were stored in warehouses, and 62,920 were under purchase agreements.

Only 3,270,042 bushels had been put under support as of the same date last year; and a much smaller amount, 725,257 bushels, was stored on farms.

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● **PLYWOOD GLUE.** Consumption of soybean glue by the softwood plywood industry in September was 5,265,000 lbs. compared with 4,965,000 lbs. in August, reports Bureau of the Census.

Total consumption of all glues, including casein, urea resins, phenolic resins and others was 9,123,000 lbs. in September.

Stocks of soybean glue Sept. 30 totaled 3,042,000 lbs. compared with 2,885,000 lbs. Aug. 31.

Consumption of soybean glue by the softwood plywood industry in October totaled 5,050,000 lbs.

Total consumption of all glues, including casein, urea resins and phenolic resins, was 9,071,000 lbs. in October.

Oct. 31 stocks of soybean glue totaled 5,651,000 lbs.

● **PROCESSING OPERATIONS.** Reported by Bureau of Census for October, November.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, NOVEMBER 1952-OCTOBER 1952

Products	Production		Shipment and transfers		End of month stocks	
	Nov. 1952	Oct. 1952	Nov. 1952	Oct. 1952	Nov. 30, 1952	Oct. 31, 1952
SOYBEAN:						
Cake and meal†	519,499	539,465	501,858	530,542	78,110	60,469
Lecithin‡	2,112	1,803	1,829	1,852	1,643	1,360
Edible soy flour, full fat†	876	540	744	652	283	151
Edible soy flour, other†	5,122	5,042	5,118	5,274	810	806
Industrial soy flour†	3,024	3,907	2,634	3,671	1,316	926

† Unit of measure in tons. ‡ Unit of measure in 1000 pounds.

SOYBEANS: RECEIPTS, CRUSHINGS AND STOCKS AT OIL MILLS, BY STATES, NOVEMBER 1952-OCTOBER 1952
(Tons of 2,000 pounds)

State	Receipts at mills		Crushed or used		Stocks at mills	
	Nov. 1952	Oct. 1952	Nov. 1952	Oct. 1952	Nov. 30, 1952	Oct. 31, 1952
U. S.	787,216	*2,891,136	661,101	675,223	2,691,000	*2,564,885
Arkansas	33,633	174,229	19,988	19,523	173,323	159,678
Illinois	304,053	1,063,185	252,539	264,988	1,013,900	962,386
Indiana	62,908	317,797	69,606	77,371	259,015	265,113
Iowa	105,521	382,565	108,782	115,254	320,888	324,149
Kansas	(1)	54,158	12,349	12,875	16,815	31,793
Kentucky	(2)	81,725	15,047	15,540	(2)	75,812
Minnesota	54,399	(2)	35,552	32,341	52,307	33,460
Mississippi	21,293	81,883	12,671	10,640	83,560	74,938
Missouri	10,712	77,674	19,815	17,297	97,214	106,317
Nebraska	3,202	34,122	5,099	3,968	29,872	31,759
North Carolina	30,942	8,608	3,565	382	35,004	7,627
Ohio	84,190	356,470	74,588	71,849	305,804	296,202
Oklahoma	3,887	20,515	5,563	3,213	26,780	28,456
Texas	(2)				(2)	
All other	75,105	* 249,106	26,547	29,882	276,518	* 167,195

* Revised. (1) Receipts exceeded by reshipments of beans previously received and held in the State. U. S. receipts are on net basis, excluding transfers between mills. (2) Included in "All other" to avoid disclosure of figures for individual companies.

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, NOVEMBER 1952-OCTOBER 1952

State	Crude oil (thousand pounds)				Cake and meal (tons)			
	Production		Stocks		Production		Stocks	
	Nov. 1952	Oct. 1952	Nov. 30, 1952	Oct. 31, 1952	Nov. 1952	Oct. 1952	Nov. 30, 1952	Oct. 31, 1952
U. S.	231,017	238,300	46,208	50,039	519,499	539,465	78,110	60,469
Arkansas	6,059	6,067	1,350	1,900	16,264	15,229	3,978	3,287
Illinois	91,656	97,216	13,705	17,460	189,050	205,450	23,044	18,477
Indiana	24,881	27,498	4,912	5,029	54,407	62,933	(1)	(1)
Iowa	38,215	40,399	8,456	9,766	89,814	95,070	7,402	4,458
Kansas	4,386	4,536	1,177	1,677	10,558	10,976	(1)	(1)
Kentucky	5,679	5,809	321	(1)	11,755	12,181	868	(1)
Minnesota	10,427	10,103	2,295	2,834	28,795	26,785	1,867	1,540
Mississippi	4,382	3,582	953	936	10,319	8,453	1,506	974
Missouri	6,566	5,744	2,216	1,228	16,363	14,288	2,097	1,548
Nebraska	1,604	1,311	759	438	4,369	3,395	(1)	(1)
N. Carolina	989	140	238	123	2,843	358	1,482	328
Ohio	25,755	25,196	5,774	3,803	59,613	57,792	5,421	3,559
Oklahoma	1,454	911	169	331	4,122	2,605	1,764	879
Texas								
All other	8,964	9,788	3,883	4,514	21,227	23,950	28,681	25,419

(1) Included in "All other" to avoid disclosure of figures for individual companies.

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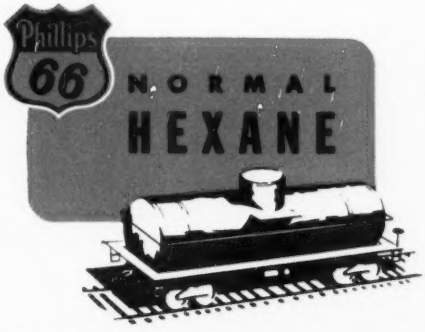

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This "Giant Feed Power" message in leading farm and poultry publications is just one part of a *Giant Power Program* that is helping Wayne Feed Dealers sell more Wayne Starting Feeds than ever before . . . thru Giant FEED Power, Giant ADVERTISING Power, Giant MERCHANDISING Power, Giant PAYOFF and PRIZE Power! *Inquire now about possible dealership!*

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Now . . . you can get *all the growth potential* of your young stock . . . safely, economically, quickly . . . with *Giant Feed Power*—created for you by Wayne Research thru exclusive blends and balances of 1953 *Power Ingredients!* Antibiotics; Vitamin B-12; 3-Nitro; B-Complex Vitamins; Trace Minerals; Sardine Oil; D-Activated Animal Sterol; Riboflavin; Calcium Pantothenate and many others in correct, high-potency proportions.

For REPLACEMENT CHICKS: Feed Wayne Chick Starter for remarkably *fast growth* and balanced *body development*. Builds rugged pullets with sturdy bodies and digestive systems geared for heavy early laying.

For BROILER CHICKS: Feed high-efficiency Wayne Rocket Broiler, get meaty, *premium finish* birds with minimum feed, time and work. Powerful ingredients, including 3-Nitro, assure bright combs, lustrous skin, golden shanks.

For PIGS: Creep-feed Wayne Tail Curler to push pigs (nursing or on sow's milk replacer) from 2 weeks to 75 lbs. in a hurry. Helps make runty pigs thrifty, normal pigs thriftier. Does so much—costs so little!

For CALVES: Feed Wayne Calf Starter for quick, uniform start at *substantial milk savings*. A highly-fortified feed to build bigger calves at 4 months, ready for earlier breeding. Every bite is balanced!

For TURKEY POULTS: Feed high-energy, low-fiber, 28% Wayne Turkey Starter (fortified with 3-Nitro) for early, low-cost gains.

All Wayne Poultry and Turkey Feeds named above are available in KRUMS (krumblized mash) form. KRUMS reduce waste; are easier, cleaner to feed; birds actually gain more!

Start in time! See your Wayne Feed Dealer NOW!

ALLIED MILLS, INC.

Executive Offices: Chicago 4, Ill. • Service Offices: Ft. Wayne 1, Ind.

WAYNE FEEDS

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